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THE BOSTON Medical and Surgical JOURNAL

OFFICIAL ORGAN OF THE MASSACHUSETTS MEDICAL SOCIETY AND OF THE NEW ENGLAND SURGICAL SOCIETY

Vol. CLXXX, No. 9
$5 per Annum, 15c per copy

THURSDAY, FEBRUARY 27, 1919

Published weekly in Boston, at 126 Massachusetts Avenue

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Medical Clinics of North America. Issued serially, one octavo of 300 pages, illustrated, every other month (six numbers a year).
Per Clinic Year (July to May): Cloth, $14.00 net; paper, $10.00 net.

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ON THE NEED OF MORE FREQUENT ROENTGENOLOGICAL EXAMINATIONS, PARTICULARLY IN HEAD INJURIES.

BY J. SHOHAN, M.D., BOSTON.

IT stands to reason that the more often one resorts to roentgen examinations, the more often one meets with negative findings. That, of course, is obvious, and it is true of all classes of injuries, and of all methods of examinations.

It matters little whether it be a stethoscopic examination, blood pressure, urine examination, or blood examination. The more often one resorts to any of these methods the larger the number of negative examinations one will make, but it is equally true that the number of the positive findings will grow, too, and that, after all, should be the aim of every careful and conscientious examiner; the demonstration of every positive case.

Theoretically in all cases, practically in, at least, the vast majority of cases, it is possible to establish definite findings, provided we are willing to go to the trouble and expense, of course, to examine every case under our observation.

Some time ago Dr. James T. Case made the interesting experiment of examining, roentgenologically, the gastro-intestinal tract of every case admitted to the Battle Creek Sanitarium, no matter what their ailments were or for whatever reason they were admitted to that institution. He was able to report a considerable number of positive pathological findings in the gastro-intestinal tract of patients in whom there was not the slightest ground for suspecting such trouble. Since then it has been the rule of that institution to examine, roentgenologically, the gastro-intestinal tract of every patient admitted.

In 1915, I had occasion to make observations on a large number of German soldiers. I had to make a roentgenological chest examination in every case. My surprises were many and, at times, startling. Many a young and apparently robust fighter was found to bear within his lungs unmistakable evidence of active tuberculosis.

The year before, 1914, I spent considerable time in Vienna. I had the good fortune to spend some time in a "Kranken Kasse" roentgen laboratory. I could not help noticing the remarkably large number of negative, or almost negative, findings amongst the cases examined. One day I remarked to the director of the laboratory, Dr. Robinson, about the apparent waste of so much work on negative cases. His answer was,

"Would you rather we overlooked some positive findings?" After awhile I began to see the value of apparently negative findings.

I recall one or two striking cases. A case of injury to wrist was referred from the examining surgeon, for roentgen examination. It was clinically quite evident that the bones were not involved. The roentgenogram, though, showed a loose ununited ulnar styloid. At first glance, one was inclined, at least I was inclined, to connect this finding with the recent trauma. On closer observation it was evident that the styloid was not recently separated from the main bone; it was too well rounded, and had a fine layer of cortex all around it. Dr. Robinson turned around to the patient and asked him, "Tell me, friend, how long ago did you break your wrist?" The answer was, "Five days ago." "Yes, yes," rejoined the doctor, "I know about this time, but the previous time, quite some time ago." The poor patient was rather startled to hear this doctor, in front of him, talk to him of his old injury, which he, himself, was apparently only too anxious to pass over in silence. However, after a brief hesitation, he admitted that he did break his wrist some 14 years ago. The importance of this case lies in the fact that after two or three months it would have been impossible for anyone to tell whether that separated styloid was the result of his recent accident or not. He might have had his hand roentgenized then, and on discovering the broken styloid, claimed compensation for a broken bone, and received it, too.

Another instructive case that impressed me was that of a man, who gave a story of an injury to his back, obviously of light character; if I remember correctly, he fell on a slippery floor in his workshop. He held himself fairly rigid and was exceedingly loud in his lamentations.

Every touch along the spine would elicit apparent tenderness. The rigidity in the dorsolumbar region was evidently genuine. However, clinically, there was not the least reason to suspect bone injury to any section of the spine. It almost seemed a waste of good time and plates to examine the man's back. But the examining surgeon and the roentgenologist had not only a clinical interest in the case, that is, to establish a diagnosis and prescribe proper treatment, they also had an "insurance interest" in him. He was a member of a sick insurance society and it was their duty to do justice to him, as well as to the treasury of the society. He was examined and found to have a fairly advanced case of hypertrophic arthritis of the last dorsal and first two lumbar vertebrae, with "lipping" of the inter-articular discs; an almost typical "Bechterew spine."

It was made clear to the patient that he was suffering from an old condition, a long-standing case of rheumatism. The plates were shown to him, and also the plates of a normal spine. He soon admitted that he had had a stiff back for some little time, and realized that his back trouble could not possibly be due to his recent fall.

In this case, if he had not been roentgenized immediately after the accident, but, perchance, several months later, it would have been impossible to tell to what extent, if any, his fall contributed to the condition of his spine. Most assuredly, no one could honestly have stated that his fall did not have any relation to the condition of his spine, for we all know that trauma is a factor in hypertrophic joint disturbances.

The two cases cited above are quite typical of a large number of every-day accidents, in which an early roentgen examination would prove most valuable, I almost said profitable, to those who are financially responsible to the injured, for the mediate and immediate disability resulting from his injury.

On the other hand, they also well illustrate how a delayed roentgen examination might, in many instances, not only prove of no assistance in clearing up the case for the insurer, but will often complicate matters for him and, at times, will throw on him a financial responsibility which is not justly his.

But if so much can be said of bone injuries, or supposed bone injuries, in all parts of the body, how much more does it apply to injuries of the head.

We know the classic signs and symptoms of bone injury, fractures: deformity, abnormal mobility, crepitus, loss of function, and pain. As a rule, these bear a direct relation to the extent of the injury, for they are called forth by the trauma to the bone itself. A great deal of deformity will invariably lead us to the conclusion that we are facing a bone that sustained considerable injury. It surely cannot leave us long in doubt, as to the diagnosis. The same holds good for abnormal mobility, and the other signs and symptoms. They are all direct manifestations of the violence to the bone, and most often in direct relation to it. This, however,

does not hold good in head injuries. The classic signs and symptoms of fracture will here be looked for in vain; practically never found.

When there is abnormal mobility of the skull, the case will probably have lost all interest for the medical man; it will have to be "passed up." But even the fatal termination is practically not the result of the injury or fracture to the skull itself. There is nothing vital residing in the bones composing the skull, any more than in the bones composing the ankle or the wrist.

What was just now said of abnormal mobility, in relation to fractured skulls, holds good of the other signs of fracture: deformity and crepitus. Who will attempt to elicit crepitus pre-mortem in an injured skull? Not a medical man, I hope. In most cases, the very helpful sign of deformity is not much more valuable when applied to head injuries. Depressed fractures are the only ones in which one may look for deformity; look for, but not often find; and when apparently present, of how much value is it, really?

Human skulls are not symmetrical spheres. Those who have had the opportunity to observe a large number of human skulls, know well, know too well, how uneven, how irregular they are, with their bumps and their depressions, their hills and dales, their "ups and downs," even as the lives of their possessors. To infer the presence of a depressed fracture from an unevenness or depression on the skull, would, indeed, be rash.

Within the last month I had the good fortune to roentgenize the skull of a young boy of about 10. He was struck by an automobile while at play, and sustained an injury to his head. Over the occiput to the right, a little below the lambdoid suture, there was an oblong area of depression, running sagittally for about an inch. The depression was exaggerated, apparently, by the destruction of the scalp right where the blow was struck, a squashing of the soft parts, and the resultant swelling of the scalp adjacent to it. One could readily place one's little finger into that hollow for about a quarter of an inch. The roentgenogram showed plainly a fracture of the occiput, but no depression, just a fissure extending for about an inch and a half. The physical condition of the child was in every respect normal. He was up and about, eating and playing as well as ever, no abnormal neurological manifestations, no psychoses, no psychisms.

My statement to the surgeon read: Fissure of the occiput, no depressions; surgical interference at present not indicated. However, because of the depressed area I mentioned above, the surgeon operated on that skull and found, of course, a mere fissure. Were it not for that depression, there would have been no reason or no excuse for trephining that child's skull.

No doubt it is to be regretted, but it is nevertheless true, that we cannot apply our knowledge and experience, no matter how extensive, of fractured bones in any part of the body, when we come to deal with fractures, or supposed fractures, of the bones of the cranium. The old-time bone setter, or his modern congener, whose good, honest judgment, skill, and knowledge are so valuable in diagnosing and treating all classes of fractures, hardly has a place at the bedside of a victim of a skull injury. It is the neurologist and, I add without hesitation, the roentgenologist, who have a place there, next to the skillful head surgeon—and why? For the simple and obvious reason that the signs and symptoms, all the manifestations, and the unfortunately frequent fatal termination that follow any trauma to the cranium, are but little due to the violence done to the bone, it matters little how severe, but to the violence that was incidentally done to the contents of the cranium and its meninges. It can be truly said that our patient is not suffering much from, or dying from a fracture of the cranium but a "fracture" of the brain, or its meninges, or both.

The neurologist can frequently shed considerable light on the brain injury and its extent, but his evidence as to the condition of the cranium itself is only indirect, and not always conclusive.

Do all fractures of the skull produce marked neurological disturbances? In other words, are all cranial traumata accompanied by trauma to the brain and its meninges? The answer must, of course, be emphatically in the negative. It is the every-day experience of all careful observers that skull fractures are not always accompanied by brain or meningeal injury.

The case of that little fellow I cited above is an illustration and a type of a large number. I shall have occasion later to speak of a similar case, in which a fissure of the parietal over three inches in extent, produced no signs or symptoms whatsoever, and would have been over-

looked, were it not for the roentgenological evidence.

A considerable number of cranial fractures, belonging to the so-called "bursting" or "bending" type of fractures, do not always produce brain lesions. In every instance it would depend upon the amount of stress the skull was subjected to. Then comes the class of fractures overlying the "silent" areas of the brain, in which slight injuries will produce neither motor nor sensory disturbances.

At their best, the neurological manifestations in cranial fractures are often a blind guide, at times confusing, and often absent altogether.

Thus we see the medical man quite often helpless when facing a victim of skull injury. His knowledge and experience with fractures in general are of no value to him; neurological evidence may be absent, or when present, far from conclusive. His only fairly safe and sure guide is the roentgenological evidence. This evidence, in almost all cases, is all sufficient to establish the presence or absence of a fracture, its location, its extent, and its character. It may also indicate, if only to a limited extent, the therapeutic procedure; whether the fracture is depressed or not, hence, whether trephining be urgent or not.

At this late date, there is hardly any need for further demonstration as to the place of roentgenology as an aid in the diagnosis of bone injuries; its place is now well established. But if that is so in regard to injuries of all the bones in the body, it is ever so much more so in regard to injuries of the cranium.

Unless we submit every head injury to roentgen examination, we are bound to overlook many fractured skulls. No doubt many have been overlooked in the past, and many will be overlooked in the future, unless one makes it a hard and fast rule to roentgenize every injured skull, and that, too, as soon after the injury as it is at all possible.

The repair process of fractured cranial bones differs materially from that of other bones in the body, long or short. We know how any bone in the body is repaired: by callus formation, to which the periosteum contributes the major part. Weeks after, and months after a bone was fractured, the place of injury may still be recognized roentgenologically, and at times even by simple palpation, because of the heavy overgrown callus that invariably results. Long after, in some instances years after the injured individual has resumed his normal activities, should the nature of his former injury come into question, should it ever be of interest to determine whether his former injury resulted in a broken bone or not, a roentgenological examination would, in all probability, determine that point very definitely. The eburnation on the cortex of a long bone may tell its tale of a fracture long after the occurrence has been completely forgotten by the injured and his friends. All thanks to the heavy callus that was once there during the process of repair. In fact, in cases of fresh fractures of the fissure type, with hardly any separation of fragments, it is even possible to overlook them on the roentgenogram at first, but at first only. Ten days or two weeks later, the tell-tale callus will not leave us in doubt very long. Unfortunately, it is not so in fractures of the cranium; callus of a fractured cranial bone is very light indeed, for the process of repair is very different here.

The pericranium and dura are both capable of producing bone, nevertheless they take but little part in the repair of the broken cranium. That is almost entirely repaired by the cancellous tissue of the diploic layer, between the outer and inner tables; hence the thick callus, the product of periosteal activity, is missing here.

It is hardly an exaggeration to state that it is possible to demonstrate definitely the presence or absence of every fresh fracture of the skull. Any one who has seen a number of fractured skulls, can hardly ever mistake a fracture line for anything else. The story, however, assumes a different aspect two or three months after the injury. A fracture may have been there, regeneration may have taken place, there may be no callus, and very little else to indicate the line of fracture. A roentgenogram taken then, no matter from what angle and how carefully, will defy at times the most expert.

The patient may complain now of headaches, may show psychic disturbances, slight memory deterioration, irritation, short confusional periods; may go on to epileptoid seizures, or even apparently true epilepsy. Neurological disturbances may manifest themselves. I have observed patients who have had any and all of these signs and symptoms. They dated their troubles from, and definitely ascribed them to a former head injury: a fall, a blow, a collision. They may tell the truth, and again they may fabricate; some belong to one category, some to the

other; it is not at all a simple process to eliminate the sheep from the goats.

The preëminent question in all these cases is, was the cranium fractured at the time of that fall or of that blow a year ago, two years ago, many years ago, or was it not?

The cranium may not have been injured, a strong subjective element may enter into the various complaints of this patient, perhaps a case of traumatic neurosis. Again, all his troubles may even antedate his injury; he connects it all with his accident or fall from an ulterior motive, as is often the case. But it is just as conceivable that his former injury did cause a fracture of his skull at the time. He was unconscious for a while, probably for a very short while, "just stunned" by the blow, as they often put it; he was picked up by someone nearby, or even helped himself up; he might have been taken to a neighboring hospital, where he stayed several days or a week, then went back to his daily task, perhaps did not feel quite so well, but continued at his work. I have heard this story again and again. At that time, he was discharged with the all-too-ready diagnosis of concussion of the brain, and let go at that. Today we meet him in the neurological clinic, perhaps he graces a psychiatric clinic, or a psychiatric ward, a thoroughly miserable and helpless being, and to the roentgenologist the question is put up to demonstrate whether or not this man's cranium was fractured months or years ago. This feat can be accomplished only in a few cases, whereas at the time of the accident, or very shortly after, it would have been a comparatively simple problem and solved with little difficulty by a careful, painstaking roentgenological examination, carried out by one who is not only a mere technician, a so-called x-ray "picture-taker," but by one who possesses sufficient medical knowledge to appreciate the full clinical importance of each and every case.

A little over a year ago, I had occasion to examine a case for an out-of-town surgeon. The patient fell off the running board of a street car. He struck his right side and head. He was taken to the local hospital there, where they did have some sort of a roentgen laboratory that was in charge of the "general utility man"; he was fireman, porter, and x-ray picture-taker. The patient, who struck the right side of his head, was naturally quite tender on that side, and when he came to "lie" for his picture, he expressed a preference to lie on his sound side, the left, to which the "artist" in question did not object. The result was a technically fairly good roentgenogram, but very faint evidence of fissure, which the surgeon saw fit to disregard. About two months later I examined the same case and could readily demonstrate the line of bone discontinuity in the right parietal bone, for I had the site of injury in close contact with the photographic plate, and besides took stereoscopic views. Very likely, a year later, it would have been, at best, very difficult to demonstrate that fracture.

Every trauma, being a pathological condition, presents, as a matter of course, a clinical problem; the problem may be simple, or complex, depending upon the extent of the injury, its site, and its character. But alongside with the clinical aspect of the case, almost all injuries present also a medico-legal problem.

After we discount the few self-inflicted injuries, all traumas are accidental in character, and the vast majority of accidents are of a medico-legal nature. While I am not in possession of any statistical data, and am not aware that any such are extant, I dare say without fear of contradiction, that by far the largest number of all medico-legal accidents are industrial in character, with the question of compensation invariably involved.

Medicine has too long remained a purely clinical science and art. It is only of late years that the social aspect of medicine is beginning to attain its proper place. An injury to the wrist, the back, the head, or whatever part of the body it may happen to be, when sustained during working hours, presents rather a complex problem, more so from its social than from its clinical aspect. It is no longer merely a matter of deciding whether or not the bones or ligaments in the wrist or back are severed. We are called upon to pass judgment upon the kind of disability that injury is liable to cause; whether permanent or temporary, partial or complete; what compensation the injured is entitled to, and how soon he can safely resume his occupation. Are the claims of the injured just, or is he shamming? In short, our interest is no longer confined to the wrist, back or head, but to the entire man or woman, as the case may be. Not infrequently, the social aspect of a given case does not harmonize with the avowed opinion of the

clinician, may even run counter to it. Many an injured person is pronounced clinically sound, yet socially he remains a mere incubus, nay, worse, a drain on society. He ceases producing and claims compensation. Is he entitled to it? That is the question par excellence.

To protect ourselves, that is Society (or the individual or corporation that assumes this social responsibility), against the imposition of the unscrupulous, is our first duty. It is no less our bounden duty to protect every individual in his just claims on Society in which he was a producer while his health permitted, and before he was incapacitated while performing his duties.

We can invariably give each the maximum of protection by ascertaining, with all the means at our disposal, at the time of every injury, just what damage was or was not done to the injured part.

Far be it from me to minimize the importance of the clinical data, the expressed opinions of the attending physicians, but should we not also substantiate them, by all the objective evidence we can possibly obtain? What better objective evidence can we possibly have than properly taken roentgenograms?

No doubt our experts will, for some time yet to come, find cause to differ in the interpretation of certain roentgenograms. But as time goes on, the technic of roentgenological examination will surely become more perfected, and our skill in the interpretation of the various shadows on roentgenograms will leave less room for difference and dispute among our experts. Even with our imperfect knowledge of technic and interpretation, roentgenograms constitute at present our best, if not only, objective evidence in bone injuries.

Our European confrères have already grasped the full significance and value of such objective evidence, as witness the well equipped roentgen laboratory, always in charge of the very best men, in connection with their Sick and Accident Insurance Societies. This is, no doubt, due to the fact that Social Medicine was recognized on the other side of the Atlantic and assigned its proper place some time before we here learned to appreciate its full significance. Doubtless we in the United States, with the traditional American progressiveness, will shortly be abreast of them, and soon after set the pace for them.

The two cases, that of the wrist injury, and that of the back injury, cited above, are, of course, typical of a host of similar cases, and show how much annoyance and unnecessary expense may be saved by a timely roentgenological examination. On the other hand, neglect of this practical and ready means of diagnosis may lead to unnecessary litigation and expense. The following will amply demonstrate.

Some time in November, 1915, an employee in one of our large cotton mills sustained a head injury while at work. He stooped down, presumably to pick up some fallen object, and on rising struck the right side of his head against the wheel attached to his machine. A small swelling was produced at the site of injury, but the scalp was not broken. He continued at his work for about an hour, with no thought of the injury. Then his head started to ache, whereupon he reported the case to his foreman Later in the day the company physician examined him. The pain in his head continued, but he remained at his work for some weeks. He then went to the local hospital, where, under anesthesia, a scalp incision was made at the site of the injury. However, he returned home the same day, but did not go to work for two days. His condition grew steadily worse, and in March, 1916, about four months after the injury, he was forced to give up his work because of dizziness and headaches.

In June, 1916, a "second operation" was performed on patient's head, this time under local anesthesia, with no relief or change in his condition. A month later, the patient was referred by an insurance claim-agent to one of our large hospitals for examination. The gist of their report was, that there was no reason why the patient should not resume his former normal activities, and the sooner he did so the better for all concerned, the patient included. It does not appear from the record that a roentgenological examination was thought of or suggested.

However, notwithstanding the good advice of the examining neurologist, the patient did not go back to work. He persisted that work was out of the question. He was in constant pain, felt dizzy most of the time, could not sleep because of his headache, and was quite miserable all around. After months of dispute, his case finally reached the Industrial Board. He was referred by the Board to one

of our local hospitals, where, in December, 1916, I had the opportunity to observe him and examine him roentgenologically. The question to determine was, of course, whether or not the man sustained an injury to his skull some thirteen months ago. I could not see any positive evidence of injury, but at the site of injury there was a typical area of gumma of the skull. I made my diagnosis before the report of a positive Wassermann was turned in, substantiating my statement.

There was, in a nut shell, the explanation of this poor mortal's suffering.

To the credit of our Industrial Board be it further recorded, they gave this poor man the benefit of the doubt, and awarded him compensation from the time he was forced to give up his work. I am sure no one will find fault with the Board for its decision. Here was this suffering, poor mill-hand who, previous to November, 1915, was self-supporting, earning his bread by the sweat of his brow, as the Good Book orders, now a helpless charge on the community in which he was once a useful member, an inmate of their poor house, and almost stigmatized as an unscrupulous shirker and imposter. Surely reason enough to award him that mite of compensation.

No doubt the award as finally handed down, was on the assumption that his sufferings were due to the luetic lesion in his skull, which assumption hardly anyone would dispute. But that is not all. It had to be further assumed that the luetic condition appearing at the site of his injury, was at least indirectly caused by the blow, and that it did not already exist at the time of his injury. If evidence, unmistakable objective evidence such as a roentgenogram, for instance, could have been produced to show that already in November, 1915, there was a luetic condition in that skull, could the Board have made that award? With all our sympathy for that poor sufferer, and granting the justice of the larger idea of industrial insurance, granting that it is the duty of Society to care for all its wrecks, no matter how they were wrecked, one could not justly demand that the insurance company in question should assume the responsibility for this man's misfortune. He did not claim, and no one claimed it for him, that he contracted lues while performing his daily task at his machine. His employer was made to bear the responsibility of his enforced idleness because it was assumed, of course, that when he struck his head on that November day, in 1915, he sustained some injury to his skull which reduced the normal resistance of the bone at that site, and the luetic lesion was called forth as a result of it.

We would have less to assume and would have more definite data to go by, if that man's skull had been examined roentgenologically at the time of injury. Again, it might have been examined four months later, when he was forced to give up his work. We would know definitely what injury, if any, the blow caused to the skull; if the signs of luetic bone lesion were already present, or if they were developed gradually after the blow and were in full evidence in March, when he was finally incapacitated for work.

How much more simple the problem would have been then, and how much more justly we could have solved it, more justly to both employer as well as employee!

Granted that when this mill-hand was first examined by the mill physician on the day of the accident, there probably were no strict clinical indications to submit the patient to a roentgenological examination. Clinically, perhaps not, but from the broader aspect of medicine from the social aspect, there was every reason for it, as subsequent events proved.

Another case that might be of interest in this connection is that of a colored expressman who fell off his team and struck his head. He was taken to one of our hospitals, where he remained two days, then was discharged, apparently well. No roentgenological examination of his head was made, and consequently there is no way of ascertaining whether or not the skull was fractured by the fall. He returned to work, but acted rather queerly, according to the testimony of his employer and fellow workers. He appeared confused at times; orders had to be repeated to him as he did not seem to grasp the meaning of ordinary words.

A week after he resumed his work, while going down stairs with a trunk on his back, he fell again. He was taken to a hospital, and shortly afterwards I roentgenized him, and demonstrated an extensive fracture of the parietal bone.

The problem of compensation did not enter into the case, though the final chapter of the case is unknown to me. The interesting ques-

tion nevertheless arises, when did this man fracture his skull, at his first fall or at his second? In this particular case, nothing had transpired between his first and second fall to make the answer of practical value. But a host of possibilities might have complicated the case exceedingly. He might have changed employers, and thus, perhaps, be transferred from one insurance company to another. Or his employer might have changed his insurer, and thereby placed the burden of this man's disability where it did not belong. We know that he was irritable and, at times, confused after his first fall. Supposing that, at this time, he got into a brawl with a pal and was struck, and his fractured skull subsequently discovered. Where are we to place the responsibility? How are we to know? And yet on the answer to that question may hang the reputation, the freedom, the very life of a fellow-man.

From my own limited experience, I could readily multiply these instances, proving in every case the all importance of early roentgenological examination in all injuries, especially in those of the head. I cannot resist the temptation of citing briefly one more instance. This was an accidental injury that did not have a medico-legal side to it, though it could hardly be said that even this case was without its social value. Every person injured and thereby incapacitated is a social loss, whether or not he has any legal claim for compensation.

This man, a trifle the worse for the beverages he had imbided, had a friendly tussle with a pal; he was thrown to the ground and banged his head against the sidewalk. He was unable to get up, and was taken in an unconscious condition to one of our hospitals. Apparently his alcoholic breath was what mainly attracted the attention of the medical attendant. He was considered as a case of alcoholism. In a day or so he "sobered" up, and a few days later was discharged. He was home a week, when he developed a motor aphasia; he was confused and dazed. His roentgenogram showed a fracture of the parietal, running into the temporal, altogether probably over five inches in extent.

This poor man had only himself to blame for his troubles, but that, nevertheless, does not absolve us medical men from our duty to him Who will say that we did our full duty by him when he was permitted to shift for himself with his severed skull, while the means to verify his condition were so close at hand? This case, as well as the others, must bring it home to every one of us, that unless we make it our golden rule to roentgenize every accident, especially of the head, we are bound to overlook a large number of serious cases.

It stands to reason, that the more often we shall resort to roentgen examinations, the more often we shall meet with negative findings, but no man with a severed skull will be discharged from a modern hospital, in the mere care of his wife, and few luetic skull lesions will escape observation for months. We shall not run the risk of burdening one insurance company with the responsibilities of another. We shall avoid a good deal of unnecessary litigation, and friction between employee, employer, and insurer. We shall have more definite data that will make it possible for us to deal more justly with all concerned.

Selected Papers.

ERRORS OF DIAGNOSIS IN PRIMARY EXTRA-GENITAL SYPHILITIC LESIONS.*

BY MARCEL PINARD, M.D., PARIS, FRANCE.

Ex-Chef de Clinique at the Faculty of Medicine, Paris.

SEEING that the lesions of primary syphilis not infrequently give rise to errors of diagnosis when they present themselves in the usual spot, *e.g.*, on the reproductive organs, it is not surprising that such errors should be of even more frequent occurrence when the lesions attack other parts of the body. Sundry instances of this have recently come to our notice in which non-recognition of the syphilitic nature of the lesion was the cause of the disease being communicated to others, an accident which an earlier diagnosis would have obviated.

A soldier, D, was on furlough from October 13 to 23. He had occasion to consult the medical officer of the district where he was staying for considerable glandular enlargement under the chin, which he was told would have to be opened. He did not like the idea, so he postponed any active measures until his return to the regiment, and there, after passing through various auxiliary hospitals, he gravitated into one where the condition was diagnosed as

* Reprinted from the Medical Press of Jan. 1, 1919.

"goitre." An operation was judged necessary, and photographs were taken, full face and in profile. It may be conceded that on the strength of the photographs one would be almost tempted, were it not for the rather high-up situation of the tumefaction, to call it exophthalmic goitre, the right eye looking upwards favoring this explanation. However this may be, the patient narrowly escaped being operated upon, his exemption being due to the intercession of an army surgeon, who noticed that he had a secondary eruption, whereupon the patient was transferred to a syphiligraphic centre on November 4.

It turned out to be a case of syphilitic chancre of the mouth with tremendous enlargement of the glands. As so often happens, the razor was incriminated, but it is left open to question whether the razor cut into a chancre in the course of formation, or whether it created a solution of continuity which subsequently became infected.

Another soldier, while being shaved early in October, bled under the chin. He was dressed at the infirmary, where it was thought to be a mosquito bite. The wound was dressed with wet dressings, but did not completely heal until December 10.

In November, however, he complained of pain on swallowing, and aphonia, and he went to a hospital for a month, where he was treated with gargles and collutories, without any improvement. As he was anxious that his tonsils should be removed, he was sent to the throat clinic, where syphilis was diagnosed, and he was dispatched to a centre for syphilis on December 15, that is to say, two months and a half after the appearance of the primary lesion. Traces of the chancre remain under the chin, where there are still enlarged glands.

A third patient was transferred on December 1, 1917, with the diagnosis, "glandular abscess of the left axilla." He was admitted to the surgical ward on December 7, when he was suffering from sore throat, with high fever, severe nocturnal headache, and albuminuria. Papulo-erosive lesions were discovered on the sheath and scrotum, present since December 3. There upon the patient was transferred to a syphilitic centre. The diagnosis of secondary syphilis could not be called in question. The much-enlarged axillary glands which, for a long time, were the only observed lesion and motivated his removal, still existed. We thought they might reveal the whereabouts of the primary lesion, and after close scrutiny we found a red scaly patch on the dorsum of the second phalanx of the left middle finger, slightly infiltrated but actually healed. This had made its appearance four months previously, in September, and was caused by a log of wood that had pinched him. The resulting ulceration had been dressed for a long time as for an ordinary wound.

A fourth patient, employed in a munition factory, was sent by his doctor to the dermatological clinic on account of a cutaneous eruption. It proved to be a maculo-papular secondary syphilitic eruption. Search was made for the primary lesion, which was neither in the throat nor on the genitals. A dressing on the right thumb led us to suspect that origin, and as a matter of fact we found there an ulcer that had existed since two months, depressed, irregularly oval, not punched out, with a red muscular floor, slightly infiltrated. No epitrochlear adenitis, but some enlargement of the axillary glands. Wassermann reaction strongly positive.

The patient's wife, on examination, revealed nothing of interest after several careful clinical examinations. The uterine cervix appeared to be normal, but there was some metritis. She had complained of severe attacks of headache for several days past, and the Wassermann reaction was feebly positive. It would seem, therefore, that her syphilis was more recent than that of her husband, and was particularly insidious in that no cutaneous manifestation could be discovered.

A patient seen a few days later for syphilis of somewhat older standing than that of the husband of this last named patient turned out to be the fellow worker of the woman, and sat next to her at table.

These several cases show the importance for the practitioner of being prepared to diagnose extra-genital syphilis. The chancre itself as well as the glandular enlargement might pave the way to very unnecessary surgical interventions, and open the door to further infection, not to speak of the consequence to the patient of having no proper treatment for many weeks or months.

Society Report.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

MEETING OF WEDNESDAY, JANUARY 1, 1919, AT 8 P.M.

The President, COLONEL RICHARD H. HARTE, in the chair.

RECONSTRUCTION PROGRAM OF THE PUBLIC HEALTH SERVICE.

SENIOR SURGEON CHARLES E. BANKS, U.S.P.H. S. Washington, D. C.: Whoever writes the history of the present war will find among the most significant of its developments the achievements of our profession in the field of preventive medicine; in the huge army of nearly five millions mobilized in the United States there have been less than 200 cases of typhoid fever. One may safely say that as a result of the remarkable work in sanitation and preventive medicine carried on by the allied medical organizations, hundreds of thousands of fighting men were preserved from ignominious death from preventable disease. That which has been accomplished in the military zone under most unfavorable environments can be duplicated in civil life under less complicated conditions. The men whose lives were saved by the application of modern sanitary methods and the principles of preventive medicine understand the necessity for application of sound sanitary principles to the ordinary daily walks of life. They will not only practice these principles themselves, but demand that those in authority in health matters shall apply them in the interest of the public health. The superficial work which has characterized a good deal of our health activities in the past will be no longer tolerated. The medical profession must be prepared for a reconstruction of methods in connection with the public health. The saner logic of preventive medicine will supersede the ancient order of attempting to cure disease that has become established. The leadership in this period of reconstruction will naturally devolve upon the United States Public Health Service. The program with which this national organization intends to meet the emergencies of the situation is comprehensive and far-reaching, and for its full success is dependent upon the coöperation of organized medicine. It meets urgent national needs by outlining health activities which are practicable and which will yield the maximum result in protecting national health and will diminish the toll of thousands of lives sacrificed by preventable disease and unsanitary conditions. The program comprises exhaustive work under industrial hygiene, prevention of the diseases of infancy and childhood, water supplies (National development of safe water supplies), milk supplies (National development of safe milk supplies), sewage disposal, malaria, (National development of measures for its control), venereal diseases, tuberculosis, railway sanitation, municipal sanitation, health standards, health education, collection of morbidity reports, organization and training for duty in emergency of the reserve of the Public Health Service.

If this great world war found us unprepared, let the same not be said of us in this period of reconstruction.

DR. J. M. ANDERS: Public health activities have greatly suffered during the war, and this is perhaps especially true of civilian tuberculosis activities for the reason that many able workers were in the Army and Navy. Perhaps the most important of the lessons we have learned in the recent world war is the fact that the individual efficiency of the men on the firing line is the foremost factor in modern warfare. The large percentage of rejections, by the local draft boards, of the men called to the colors, directs especial attention to the problem of physical education in this country during this reconstruction period. Every individual, it seems to me, should be taught how to promote his or her health and I believe this could be best accomplished in connection with our public and secondary schools as well as in the colleges and universities. While the idea of universal military training should be encouraged, the scope of the plan should be, and the one presented tonight is, sufficiently comprehensive to include the entire American race. I believe that if in the immediate future sufficient attention were devoted to the matter of physical education many of the details in the program just outlined by Colonel Banks would in due course be found to be unnecessary. All are probably aware of the fact that in England there has recently been formed a ministry of health which will combine and coordinate all the public health activities under one head. Such a reorganization of the public health activities in this country would be a consummation devoutly to be wished

for, and it would certainly facilitate that which Col. Banks has emphasized, namely: the necessity of sympathetic coöperation among all allied agencies having to do with public health work. Moreover, I feel strongly that there could be no more propitious time than the present to set in motion efforts to this end.

American Medical Biographies.

GAULTIER, JEAN FRANÇOIS (1708-1756)*

A King's Physician of Quebec after whom was named the checkerberry plant, *Gaultheria procumbens.* Botanists, Asa Gray among them, have mistaken the identity of our physician, a friend of the Swedish naturalist Kalm, when the latter visited Quebec in 1749, assigning the sponsorial honor to Hugues Gaultier, a Parisian surgeon, and surgical and botanical writer, who took his medical degree at Montpellier in 1763 and died in France in 1778. The orthography of the name Gaultier has caused botanists much discussion, but they agree that the name *Gaultheria* should stand as the proper spelling, however the original name may have been written.

Jean François Gaulthier, (also Gautier or Gauthier) was the son of René Gautier, of Lupénin, and of Françoisé Colin, of La-Croix, diocese of Avranche, Normandy. He was born in 1708, for his burial certificate in 1756 gave his age as 48 years. We learn that Gaultier on his arrival in Quebec from France attended law lectures given by the procureur général Verrier. (Roy. Hist. du Notar. au Canada, I, p. 384). These lectures were begun in 1733. In 1740 Verrier, writing to the minister of Marine, mentions Sieur Gaultier, physician, as one of his pupils and as exciting the emulation of the others by his zeal, he "giving to his law studies as much time as he could spare from his professional duties."

In 1741 Gaultier was made King's Physician for Canada, making a trip to France in the vessel *Le Rubis,* returning in 1742 after he had walked the hospitals of Paris.

According to the early records of Quebec, Gaultier became a member of the Superior Council in 1744 and an assessor, first taking his seat in the following year. In the year 1745 the Royal Academy of Sciences of Paris made him a correspondent of M. du Hamel, one of its members, and he soon sent over a collection of specimens, having to do with natural history, which was placed in the King's gardens; again, in 1749, a collection of different sorts of seeds met with a similar disposition.

Gaultier followed in the footsteps of his predecessor, Michel S. Sarrazin, in being Royal Physician to the Province, in his membership in the Supreme Council, in becoming a corresponding member of the Academy of Sciences and in his researches in natural history. In 1742 he began a journal, at the request of M. du Hamel containing records of daily temperatures, state of the weather, direction of the wind and descriptions of animal and plant life. The journal was sent to M. du Hamel who read extracts to the Academy. In the history of the Royal Academy of Sciences of Paris for the year 1744, p. 135, is to be found a memoir by M. Guettard comparing Switzerland with Canada. In this the writings of Gaultier on the minerals and mines of the country are frequently cited, especially those on a lead mine at Baie-St. Paul, for which Gaultier received a gratification of 400 pounds from the president of the Navy Board in 1750.

Jean François Gaultier married Marie Anne Tarieu of Lanaudière, March 12, 1752. She was described as being about 44 years old, daughter of Pierre Thomas Tarieu, Sieur de la Pérade, lieutenant in the army.

Gaultier demonstrated to the Academy the superiority of the Canadian tea berry to that found in France. He said it made an excellent aromatic beverage without sharp taste or bitterness, and having diuretic properties especially valuable for people who lead a sedentary life and are subject to stone.

In 1748-49 the Swedish naturalist, Peter Kalm, visited New England and Canada. At Quebec he met Gaultier, who, at the command of the Marquis de la Galissonnière, edited Kalm's list and description of plants of Canada, the Marquis himself correcting and annotating it with his own hand. Gaultier was named by the Governor to accompany Kalm. They visited the Hôtel Dieu, August 8, 1749, two days after Kalm's arrival, and the latter refers to his guide as "a man of great learning in physics and botany and now the physician to the convent." (Voyage de Kalm, in Mém. Soc. Hist. de Montreal, 8e livr. 1881, p. 101.) Kalm

* From the forthcoming "American Medical Biography," by Dr. Howard A. Kelly and Dr. Walter L. Burrage. Any important additions or corrections will be welcomed by the authors.

copied into his account of his voyage Gaultier's botanico-meteorologic observations during the year 1745.

Kalm is said to have given the name *Gaultheria procumbens* to the Canadian tea berry, in honor of his friend. In the year 1753 Gaultier presented a paper on the subject of maple sugar to the Academy, one of the eight papers that were thought worthy of printing and now to be found in the Transactions.

Gaultier died in 1756, probably a victim of an epidemic introduced to Quebec by the frigate *Leopard* of the squadron that brought over Montcalm. His funeral at the Church of Nôtre Dame de Quebec, July 11, 1756, was largely attended. His widow lived until 1776, when she died in Quebec at the age of 68.

MICHAEL JOSEPH AHERN, M.D.
GEORGE AHERN, M.D.

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Book Reviews.

The Surgery of Oral Diseases and Malformations: Their Diagnosis and Treatment (Third Edition). By GEORGE VAN INGEN BROWN, D.D.S., M.D., C.M., F.A.C.S. Philadelphia and New York: Lea & Febiger. 1918.

The great achievements in the alleviation of suffering of individuals who have been wounded in the jaws and face during this war are outlined in the chapter relating to war surgery in the third and present edition of this book. A great many illustrations of actual cases taken from the various hospitals in the war zone serve to impress upon readers of the previous editions how important a feature in the reconstruction of battle-scarred men oral and plastic surgery has become. Treatment of such wounds under war conditions could not have been so successfully carried out were it not for the great labor along these lines conducted in private practice and in hospital clinics. The experience of the author during 30 years of such practice is given here. As a teacher of oral surgery Dr. Brown has designed this book as a book of reference touching medical interests in their oral relation. It is also arranged to aid in preparing students for examination and as a guide in trying clinical situations after graduation. A comprehensive set of questions based on the subject matter discussed in each chapter is outlined, and many original drawings and photographs of patients actually treated emphasize the good results of corrective operations. The subjects discussed include: Diseases of the Mucous Membrane of the Mouth, of the Nervous System Affecting the Buccal Region of the Bones, of the Glands, of the Maxillary Sinus, Malformations, Diseases and Injuries of the Lips, Harelip, Cleft Palate and Defects of Speech, Tumors, Infectious Diseases, and the Treatment of Wounds under War Conditions.

Modern Urology in Original Contributions by American Authors. Edited by HUGH CABOT, M.D., F.A.C.S., Chief of the Genito-urinary Department of the Massachusetts General Hospital; Assistant Professor of Genito-urinary Surgery in the Harvard Medical School, Boston, Massachusetts. Volume I: General Considerations—Diseases of Penis and Urethra—Diseases of Scrotum and Testicle, Diseases of Prostate and Seminal Vesicles. Illustrated with 368 engravings and seven plates. Philadelphia and New York: Lea & Febiger. 1918.

This important work is a worthy and satisfying expression of our knowledge up to date of the still young specialty of urology. The book embodies two large volumes, whose contents consist of many chapters, each one from the pen of an American author. Dr. Cabot, from his knowledge of the field of work, and from his acquaintance with the workers in America along these lines, has been able to choose the men best fitted for the work they were to do. He has shown intelligent judgment in selecting men who were young enough to do their work with interest and zeal, and who, because of the hospital and other opportunities, were equipped adequately with the experience and judgment to do their several works in a wise and satisfactory way.

While Dr. Cabot's statement in his preface that "all composite works have an inherent weakness, in that they lack the smoothness and balance of books produced by a single author," it is perhaps true that the task for a single author in producing a book of such magnitude, and the effort to make it both adequate and up-to-date is such a large one, as too often to make it a most prosaic and uninteresting presentation of clinical facts and opinions. This series of chapters presents its subject matter with freshness and vigor and with convincing authority, because of the variety of its authors, and because of their ability and experience. The book seems to the writer much more interesting, and not less valuable, than the so-called text books from the pen of one man.

To attempt a review of each article separately is obviously impossible. They are all of high grade, and are all conscientious presentations of their various subjects. The book probably

contains as complete information on present-day urological knowledge as exists in any book in the English language, and Dr. Cabot deserves credit for its compilation. The fact that the book comes from the workroom of Messrs. Lea & Febiger is sufficient guarantee of the excellence of its construction.

Military Surgery of the Zone of Advance. By GEORGE DE TARNOWSKY, M.D., F.A.C.S. Philadelphia and New York: Lea & Febiger. 1918.

The military surgeon, confronted by lack of time, inadequate equipment, and military necessity, is forced to meet many problems which he would never encounter in civil life. Medical War Manual No. 7, dealing with "Military Surgery of the Zone of Advance," has been compiled under the supervision of the Surgeon-General, for the purpose of making available to medical officers in the war service information which has been acquired by painful experience during the past three years. The general conditions under which the work must be done —the nature of the country, the location of the first-aid stations and hospitals, the limited equipment and personnel, and types of projectiles responsible for wounds, general sanitary conditions, and means of transportation—are clearly described. Of inestimable value are the methods here discussed of treating traumatic shock, hemorrhage, soft tissue wounds, tetanus, gas-bacillus gangrene, and wounds of the cranium, face, thorax, abdomen, spine, peripheral nerves, and joints. One chapter deals with the use of roentgenology in war surgery and gives a detailed description of several methods which have been found most satisfactory. Treatment of infected wounds by the Carrel-Dakin technic is explained. This book is a résumé of treatment which those best qualified to judge have considered most valuable under war conditions.

The Orthopedic Treatment of Gun-Shot Injuries. By LEO MAYER, M.D. Philadelphia and London: W. B. Saunders Company. 1918.

The task of restoring the crippled soldier not only to health but also to a wage-earning capacity, is one of the greatest problems by which the world is confronted at the present time. The day has passed when cripples are allowed to return to their homes and lead complacent lives of dependency upon society. The scope of the modern surgeon has been broadened, and now he recognizes a responsibility to the industrial world as well as to his profession. In this volume, methods of treating gun-shot injuries, both at the front and in the base hospital, are discussed, from the point of view of functional restoration. The proper fitting of artificial limbs is a problem which is receiving more attention than it has received in the past. The author of this book emphasizes the importance of this work and shows the value of a comprehensive knowledge of mechanical principles and their application to surgical cases. Orthopedic treatment of fractures, injuries to joints, nerves, muscles and tendons, is discussed and helpfully illustrated by photographs and diagrams. One chapter is devoted to the aims of organization of an orthopedic reconstruction hospital. This book presents a valuable exposition of the most modern and effective theories, which may have been supplemented by the test of experience in the present war.

The Surgical Clinics of Chicago, August, 1918. Volume II., Number 4, with 110 Illustrations. Published Bi-Monthly. Philadelphia and London: W. B. Saunders Company.

The August number of *Surgical Clinics of Chicago* contains articles by Drs. Lewis L. McArthur, Kellogg Speed, Arthur Dean Bevan, Carl Beck, Daniel N. Eisendrath, Wesley J. Woolston, Edward L. Moorhead, Golder L. McWhorter, Harry Culver, Louis E. Schmidt, Herman L. Kretschmer, William Hessert and George D. J. Griffin. Dr. Griffin gives a general discussion of fractures, the longest monograph in this number. Dr. Herman L. Kretschmer describes adequately "Fulguration Treatment of Tumors of the Bladder"; Dr. Louis E. Schmidt considers the "Operative Treatment of Urethral Fistula and Strictures"; Dr. Harry Culver gives a good review of Pyelonephritis; Dr. McWhorter outlines the technique of the removal of needles in the hand, and the treatment by operation of "Dislocation of the Fifth Carpometacarpal Joint"; Dr. Edward L. Moorhead describes a series of fractures; also a splenectomy for pernicious anemia, which followed repeated transfusions. Dr. Woolston describes a case of "Malignant Disease of the Cervical Stump after Supra-vaginal Hysterectomy," and gives a summary of 60 cases reported in the literature. Dr. Daniel E. Eisendrath gives an interesting clinical lecture upon "The Acute Abdomen," a subject which he expects to continue in another lecture. Dr. Carl Beck describes the "Treatment of Phlegmon of Hands and Fingers," and also contributes an interesting paper on "Partial Rhinoplasty." Dr. Arthur Dean Bevan discusses a series of cases, including "Hemangioma of the Scalp," extensive skin grafting, and "Sarcoma of the Lower Jaw"; also "Carcinoma of the Larynx," "Technique of Operation Under Infiltration with Apothesin." Dr. Kellogg Speed describes "Transarticular Capsulorrhaphy on the Knee" done at a base hospital in active service; this has been contributed from France. Dr. Lewis L. McArthur describes "Tumor of the Pituitary Gland—Technique of Operative Approach," which in this case was through the left frontal region, together with the removal of the roof of the orbit.

THE BOSTON
Medical and Surgical Journal
Established in 1812

An independently owned Journal of Medicine and Surgery published weekly under the direction of the Editors and an Advisory Committee, by the BOSTON MEDICAL AND SURGICAL JOURNAL SOCIETY, INC.

THURSDAY, FEBRUARY 27, 1919

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A WORKING PROGRAM AGAINST INFLUENZA.

A WORKING program against influenza, prepared by an editorial committee of the American Public Health Association, and based upon papers, committee reports, and discussions presented at the meeting of the Association held in Chicago, Illinois, December 9-12, 1918, has lately been reprinted for distribution.

In order that the administrative health officials and others who have the protection of the public health in hand, might present the results of their observations, the American Public Health Association appointed four sub-committees which formed a general committee, of which Dr. Rupert Blue was Chairman, and Dr. W. W. Evans, Vice-Chairman, to report on and discuss the epidemic of 1918 in a three-day congress. The four sub-committees,—namely Sub-Committee on Bacteriology of the 1918 Epidemic of Influenza, Sub-Committee on History and Statistics of the Epidemic, Sub-Committee on Administration of Measures for Relief, and Sub-Committee on Measures for Prevention, presented their reports to the General Committee and the results of their conclusions are contained in this bulletin.

In general it was conceded that although something is known concerning the nature of influenza, much remains to be determined and that it is necessary for health agencies to proceed in the light of present day knowledge and not to wait for a discovery of specific vaccines or sera for prevention or cure. It is expected that from time to time during the coming year there will be a recrudescence of this disease. It was therefore urged by the members of the committee that health departments be ready with plans for emergency measures, emergency funds, and that bacteriologic studies should be continued in the use of effective vaccines and culture sera. The epidemic has emphasized the great importance of these emergency measures.

The committee on bacteriology reports that the epidemic known as influenza is believed to be due to an undetermined organism, that the lowered resistance of the body as a whole allows the invasion of other pathological organisms and that the most important complicating infections are due to the influenza bacilli, different strains of pneumococci and different varieties of streptococci. It assumes that since the virus is unknown, vaccine is of benefit only in the secondary infections and that its efficacy is difficult to determine at present.

The committee on administrative measures for relief summarizes in a clear and concise manner (1) General Rules; (2) Preliminary Measures; (3) Current and Continuous Analysis of Case Situation; (4) Analysis, Augmentation, and Organization of Principal Facilities; (5) Social and Relief Measures; (6) Food; (7) Laundry; (8) Provision for Fatalities; (9) Education, Instruction, and Publicity; (10) Miscellaneous. Under each of these headings many phases of relief are considered and it would seem that if carefully adhered to, the methods suggested could not fail to produce excellent results in communities of all kinds.

The preventive measures were laid out in the following suggestions: A—Efficient organization to meet the emergency, providing for a centralized co-ordination and control of all resources; B—Machinery for ascertaining all facts regarding the epidemic; C—Widespread publicity and education with respect to respiratory

hygiene; D—Administrative procedures and Miscellaneous Considerations. Prevention in general was grouped under the following headings: (1) Breaking the channels of communication; (2) Immunization and vaccines; (3) Increased natural resistance of persons exposed to infection.

Although the committee has found it impossible to lay down rules for the guidance of all public health officials alike in preventive measures, it has, nevertheless, been able to state, and in an intelligent manner, certain general principles which, in the judgment of the Committee, are underlying administrative measures for the prevention of influenza. The application of these measures must be left to the community responsible for the protection of its public health; but in any case, the recommendations of the American Public Health Committee cannot fail to prove of value.

WORK OF THE INDUSTRIAL FATIGUE RESEARCH BOARD.

THROUGH the *British Medical Journal* the work of the Industrial Fatigue Research Board has been brought to our attention. Last May the Health of Munition Workers Committee issued its final report. This Committee, upon which Dr. Leonard Hill and Sir Walter Fletcher served from 1915, was dissolved early in 1918, but because of the general interest evidenced in this work and the excellence of its character, it was decided that such a field of endeavor was quite necessary in industry. Accordingly, the Department of Scientific and Industrial Research and the Medical Research Committee determined to establish a permanent organization. Since a knowledge of both medicine and industrial science are equally necessary for the success of such a project, these two factors working together for a common object agreed that the finances should be proportioned between the two boards. The functions of this joint committee, known as an industrial Fatigue Research Board, were "to consider and investigate the relations of hours of labor and of other conditions of employment, including methods of work, to the production of fatigue, having regard both to industrial efficiency and to the preservation of health among the workers." The co-operation of employers and employed is secured by inviting members of both groups to serve as temporary members of the Board. The Chairman, Dr. C. S. Sherrington, F.R.S., is Professor of Physiology in the University of Oxford; and among the other members of the Board are representative men in the medical profession and in the industrial world. Suggestions as to any problems needing investigation may be addressed to the Secretary, Mr. D. R. Wilson, H. M., Inspector of Factories; and the board endeavors to initiate, organize, and promote by research, grants, or otherwise, investigations in different industries, with a view to finding the most favorable hours of labor, spells of work, rest pauses, and other conditions applicable to the various processes according to the nature of the work and its demands on the worker. Such an organization for the investigation of the natural laws of industrial fatigue is well worth consideration and co-operation from the public and an appreciation of the splendid work thus far accomplished.

ROCKEFELLER FOUNDATION PLANS FOR 1919.

PLANS for the completion of its war work and for extensive public health and medical education have been formulated in the program of the Rockefeller Foundation for 1919. Dr. George E. Vincent, the President, has recently issued a statement concerning the activities to be pursued and the appropriations which will be made for the various studies and demonstrations during the year. It is estimated that the income for 1919 is about $6,750,000 and of this sum $2,264,130 provides for public health work and $3,662,504 for medical education.

The Yellow Fever Commission, under General William C. Gorgas, hopes completely to eliminate this disease. The Commission on Tuberculosis in France, at the request of the French authorities, will continue its splendid work there; and in twelve of our states as well as in twenty-one foreign states and countries the hook-worm problem will be attacked. At the Johns Hopkins Hospital preparations have been made for special studies and demonstrations in mental hygiene, for a school of hygiene and public health, as well as for the development of public health nursing. Through the China Medical Board the development of train

ing in modern medicine will be the chief work of the department of medical education.

The Foundation's war work for the current year divides itself into the following activities—for the War Demonstration Hospital, for the work of the medical division of the National Research Council, for assistance in care and treatment of soldiers mentally and nervously disabled, for payment on pledges made in 1918 to the United War Work Fund, and for work under the direction of the commissions on Training Camp Activities.

REPORT OF THE MASSACHUSETTS COMMISSION ON MENTAL DISEASES.

THE second annual report of the Massachusetts Commission on Mental Diseases summarizes its activities and the work of State Hospitals during the year 1917. The Commission has general supervision of all public and private institutions for the insane, feeble-minded, and epileptic persons in Massachusetts. The care rendered in State Hospitals has necessarily been somewhat lowered because of the demand in war service for physicians experienced in the care of nervous and mental diseases. During the year, the Massachusetts Committee for War Work in Neurology and Psychiatry has been organized and has coöperated with the war work committee of the National Committee for Mental Hygiene; a uniform curriculum in all the training schools for nurses has been instituted; the Commission has accepted a new form for reporting statistics which was recommended by the American Medico-Psychological Association; a bulletin, dealing with subjects of scientific interest, has been issued quarterly.

This second annual report contains records from State Hospitals, including the Worcester, Taunton, Northampton, Danvers, Westborough, Boston, Grafton, Medfield, Gardner, Monson, Foxborough, and Bridgewater State Hospitals; also of the mental wards of the State Infirmary, the Massachusetts School for the Feeble-minded at Waltham, the Wrentham State School, McLean Hospital, Elm Hill Private School, Terrace Home School, almshouses, and twenty-six private institutions.

The total number of persons cared for by these institutions in 1917 was 19,000; of this number, eighty per cent. were insane, fifteen per cent. feeble-minded, and four per cent. epileptic.

MEDICAL NOTES.

RED CROSS HOSPITAL AT NEUILLY.—The American Red Cross Hospital at Neuilly, organized by Americans in the first week of September, 1914, was closed on February 6, when the last American wounded were removed and started on their way home. This hospital has rendered excellent service during the war, and has won the well deserved praise of the French people.

BILL TO RESTRICT SALE OF PAREGORIC.—A bill has been proposed to place paregoric and camphorated tincture of opium in the restricted list of narcotic drugs. Assistant District Attorney Webber, appearing in support of the bill, explained the necessity for this legislation, and is reported to have said that this drug has been sold in pint and quart quantities since the sale of other drugs had been restricted by the 1917 legislation. In reviewing the situation in Boston at the present time in comparison with conditions two years ago, he stated that 60 per cent. of the users of drugs were now in prison and a large proportion of the remaining 40 per cent had left the state. In speaking of the effects of paregoric among children, Mr. Webber quoted prominent physicians throughout the country, who were agreed that paregoric stupefies children and retards their mental faculties.

Major F. G. Wheatley of the medical department of the Army, one of the three commissioners who framed the 1917 drug act, appeared in favor of the measure, and is reported to have said that the question of placing paregoric on the narcotic list was considered when the original measure was drafted, but that action was delayed after several conferences between the commissioners and druggists.

Dr. W. C. Woodward of the Boston Health Department and representatives of the State Department of Health also supported the measure. At the request of druggists, the hearing in opposition has been postponed for one week.

IMMANUEL KANT ON INFLUENZA.—A recent issue of *The British Medical Journal* comments upon Immanuel Kant's interest in influenza. Although the term "influenza" was not formally adopted by the Royal College of Physicians of London until 1782, the disease was known to Hippocrates and other ancient physicians. Many physicians of the seventeenth and eighteenth

centuries had written about the disease from the clinical point of view; but Immanuel Kant, who was especially interested in medicine, was one of the first to direct attention to its epidemiology.

"Towards the end of the eighteenth century influenza swept over nearly the whole world. It reached Siberia and Russia, China and India, in the autumn of 1781, and in the following December and February it invaded successively Finland, Germany, Denmark, Sweden, England, Scotland, the Netherlands, France, Italy, and Spain. Kant, in a 'Notice to Physicians' published in the lay press of Königsberg on April 18th, 1782, considered the disease in its relation to physical geography. He expressed the opinion that it was spread not only by atmospheric conditions but by infection conveyed by insects. The paths of communication between Europe and other parts of the world by sea and by caravan were, he thought, the means of conveyance of many diseases, and he found reason to believe that the Russian trade route to China by land had brought several kinds of harmful insects from the farthest East. The epidemic of 1781-82 spread along the Baltic coast till it reached Königsberg; thence it travelled to Danzig and Prussia. Kant's interest in influenza is shown by the frequency with which he refers to the subject. With the object of procuring further information he sent his 'notice' to Russia, and from Baron von Asch, surgeon in the Russian army, he learned that in January, February, and March, 1782, a disease described as *febris catarrhalis epidemica benigna* prevailed in the Russian capital. It originated in Eastern Siberia, on the Chinese frontier, and spread through the whole of Russia."

THE INFLUENZA EPIDEMIC IN INDIA.—The epidemic of influenza has been severe in India. The *Times of India* for October 26 contained the following comments upon the conditions in India since the outbreak of the epidemic:

"From June 1st to 15th the daily mortality of the city was normal, 80 to 90; it suddenly began to increase on June 19th, reaching 230 on July 3rd; it declined to normal about July 22nd. The secondary rise began on September 12th, the mortality exceeded 730 on October 2nd; it began to decline on October 8th, and had fallen to 184 by October 22nd. The incidence rate in the summer epidemic was about 25 per cent. on Europeans and 33 per cent. on Indians employed in offices, mills, etc., but it was much lower upon the outdoor labor staff of the Health Department, being well below 10 per cent. Returns were obtained from employers of labour relating to a population of 100,000 in the first epidemic. The sickness rate was 29 per cent.; of these cases 1,640 died. The excess mortality for five weeks of the second epidemic was 13,277. Bombay was not so severely attacked as some other cities. Poona registered 210 deaths on September 30th, which would have been equivalent to 1,830 in Bombay where 768 deaths were actually recorded. In Nagpur for the week ending October 14th the mortality-rate (reduced to an annual rate per mille) was 430.8, the worst week in Bombay similarly expressed showing 257.17. By the first week of December, the Bombay mortality-rate had fallen to the normal level, the total deaths for that week amounting to 590, an annual rate per mille of 31.32."

TYPHOID FEVER IN RUSSIA.—Recent dispatches from Petrograd report that there is an epidemic of typhoid fever in Petrograd. In one hospital in this city, twelve doctors and forty nurses have died of the disease.

WAR RELIEF FUNDS.—On February 10, the totals of the principal New England War Relief funds reached the following amounts:

Belgian fund	$729,352.98
French Wounded fund	474,127.44
French Orphanage fund	454,855.21
Italian fund	278,260.99
Serbian fund	129,569.89
Russian fund	57,525.92

BRITISH MEDICAL SERVICE IN MACEDONIA.—A recent dispatch from General Sir George F. Milne, K. C. B., Commanding-in-Chief, British Salonica Force, describes the British medical service rendered during the operations of the British army in Macedonia from October 1, 1917, to December 1, 1918.

"All through the dispatch there are evidences of the way in which the army has been tried by disease; malaria and influenza had taken a heavy toll, both in strength and in numbers, but rather than miss the opportunity for which they had waited three years, officers and men remained in the ranks till often they dropped from sheer exhaustion. 'In this unhealthy climate,' General Milne continues, 'the efficient administration of the medical services is naturally of extreme importance, and in this respect a very high standard of efficiency has been attained. In an army saturated with malaria and passing through a severe outbreak of influenza, heavy calls were constantly made on the strength and devotion to duty of the Royal Army Medical Corps, of whose work I cannot speak too highly.'

"In further paragraphs General Milne writes of the indefatigable and devoted work of the nursing service and voluntary aid detachments during three years; in many instances they sacrificed their own health for the soldiers in their charge."

THE LIVERPOOL MEDICAL INSTITUTION.—The following note on the Liverpool Medical

Institution has appeared recently in *The British Medical Journal:*

"The report for the year 1918, presented to the annual meeting of the Liverpool Medical Institution in January, states that the number of members has diminished, owing to deaths and resignations during the war; but it is confidently anticipated that with the return of normal conditions there will be a large influx of new members. The library, to which numerous additions were made, has been largely used by medical members of the Overseas Forces and officers of the United States Medical Corps, who have also attended meetings in response to a welcome extended to them by the council. The Institution has decided to promote a memorial to the late Hugh Owen Thomas, the Liverpool surgeon famous throughout the world for his pioneer work in orthopaedics, and as the inventor of the splints which bear his name. A committee has been appointed, and will make an appeal early in the year. It is hoped to endow an oration to be delivered in the Medical Institution, and also to provide a bust, or some other permanent and visible memorial, of Mr. Thomas."

VICTORY OVER BLINDNESS.—"Victory Over Blindness" was the title of an address delivered at a mass meeting at the Century Theatre in New York City on the evening of February 4, by Sir Arthur Pearson, the blind founder and director of St. Dunstan's Hostel for blinded Soldiers, of London, England. Sir Arthur described his work in restoring blinded British soldiers to self-support.

Lieutenant Colonel James Bordley, in charge of work for blinded American soldiers and sailors and director of the Red Cross Institute for the Blind, told of the work being done at Evergreen, Baltimore, for men of the American Expeditionary Force who lost their sight in action.

The meeting was presided over by Douglas C. McMurtrie, director of the Red Cross Institute for Crippled and Disabled Men, under the auspices of which organization the meeting was held.

The blinded men at St. Dunstan's first "learn to be blind," according to Sir Arthur Pearson. In this process they are taught to go about independently, to use the typewriter, to write Braille, to dance, to row, and to play games of one kind or another. The next step is to teach the men some vocation by means of which they can support themselves comfortably. As many as possible are sent back to their former employment. Others learn to be expert masseurs, stenographers, carpenters, and so forth.

St. Dunstan's has an extensive after-care department which looks after the interests of the men after they have returned to their homes, sees to it that their training is effective, and that they are placed in employment or provided with home work.

APPRECIATION OF BRITISH MEDICAL PROFESSION IN THE WAR.—The following appreciation of the members of the medical profession who have served in the war has recently been adopted by the Council of the British Medical Association:

"The Council, joining in the praise given by all the nations of the British Empire to the brave men who, by their courage in battle, constancy in adversity, and endurance of hardship, have, with the aid of our Allies and the friendly American nation, brought us at length by victory to peace, desires in particular, speaking from fullness of knowledge, to place on record its sense of the greatness of the share of the medical profession in the struggle now happily ended.

"To every member of the profession, young and old, in the Home Islands, in the Dominions, in the Colonies, and in the Dependencies, came the call to service in various degrees. It came first to those who had felt it a patriotic duty in time of peace to fit themselves to serve in war—to the medical officers of the Royal Naval Volunteer Reserve, Territorial Force, and Special Reserve. They were mobilized in the first days of the war, they have served in all climes, not a few have given their lives, many have been invalided by broken health, all have given of their best. The country owes them a very deep debt of gratitude.

"At a stage almost as early medical volunteers came forward, and among the medical officers with temporary commissions in the Home and Overseas contingents are indeed many who have served throughout the war.

"Honour has been won for their profession by the gallantry of medical officers in tending wounded in the field. The Council is proud to note that the Victoria Cross has been won nine times by medical officers in this war, and that the unprecedented honour of a bar to the Cross has been granted to two medical officers—Lieut.-Colonel Martin-Leake, who won the Cross in South Africa, and Captain N. G. Chavasse, who died of wounds received in doing the noble deeds for which the bar was granted. It is proud also to record that the Military Cross has been won by over nine hundred medical officers and that many bars have been granted; the Council congratulates these gallant officers on this recognition of their courage and devotion to the beneficent work of medicine in the field, and mourns the loss of so many brave men who died in the execution of a hazardous duty before such recognition could be given to them.

"The Council records also the striking success of medicine's peculiar work in war—the prevention of disease. The British armies in Flanders and Northern France have been guarded from those epidemics which often brought disaster in earlier campaigns in these regions. That this has been achieved and that certain new and less recognized diseases of armies have been controlled, has been due to the combination of clinical inquiry with pathological research in mobile and temporary laboratories working in the field or on the lines of communication. In the treatment of wounds also the principle of prevention has been applied with a degree of success never before approached under similar conditions. In the casualty clearing stations surgical skill of the highest order has been brought early to the wounded whereby many lives and limbs have been saved, and prolonged sickness and suffering prevented. In these matters also clinical experiences and pathological inquiry have worked together.

"The medical services of the Royal Navy have achieved results as admirable. Their work at sea has been of the most arduous nature, and the treatment of the sick and wounded ashore has been organized and carried through with skill and devotion.

"Recognition is due also to the staffs of the base hospitals in all the campaigns for their skill in treatment and research, and their untiring exertions, especially during periods when the wounded were being admitted in very large numbers.

"Finally, the Council places on record its appreciation also of the manner in which those members of the profession who remained at home responded to the many calls on their energies by their work in the general and auxiliary military hospitals established in all parts of the United Kingdom, and by the manner in which they rendered the requisite medical attention to the civilian population under difficult conditions. Owing to the shortage in personnel, the stress of work has been so great that the Council here also has to express regret that members of the profession have suffered impairment of health, and some of the elder men have made the supreme sacrifice in response to the call of duty to their country.

"Those who have rendered the services herein set out have deserved well of the country."

BOSTON AND MASSACHUSETTS.

WEEK'S DEATH RATE IN BOSTON.—During the week ending February 8, 1919, the number of deaths reported was 301, against 312 last year, with a rate of 19.71, against 20.78 last year. There were 46 deaths under one year of age, against 43 last year.

The number of cases of principal reportable diseases were: diphtheria, 87; scarlet fever, 29; measles, 5; whooping cough, 12; typhoid fever, 1; tuberculosis, 44.

Included in the above, were the following cases of non-residents: diphtheria, 15; scarlet fever, 7; tuberculosis, 2.

Total deaths from these diseases were: diphtheria, 7; scarlet fever, 2; tuberculosis, 19.

Included in the above were the following non-residents: diphtheria, 1; scarlet fever, 2; tuberculosis, 1.

Influenza cases, 411; influenza deaths, 57, of which 8 were non-residents.

MASSACHUSETTS SOCIETY OF EXAMINING PHYSICIANS.—A meeting of the Massachusetts Society of Examining Physicians was held at the Copley Plaza Hotel in Boston on February 13, 1919. The principal speakers were Dr. Cecil K. Drinker and Dr. Reid Hunt of the Harvard Medical School, and Major Murray, U.S.A., M.C.

NOMINATION OF MEDICAL EXAMINER.—Dr. David C. Dow of Cambridge has been nominated to succeed Dr. William D. Swan as medical examiner of the First Middlesex District. Dr. Dow is a graduate of Tufts Medical College. For years he has been connected with the Cambridge Hospital. Since the United States entered the war, he has been stationed at the naval training station at Bumkin Island, where he was in charge of the medical department.

DONATIONS TO HOSPITALS.—By the will of the late James Harrison Fay of Brookline, the sum of $24,000 has been left to the Massachusetts General Hospital.

At the death of the wife of the late Arthur A. Smith of Somerville, the Somerville Hospital will receive $5000, Somerville Home for the Aged, $2000, Somerville District Nursing Association, $2000, Perkins Institute for the Blind, $10,000.

BOSTON MORTALITY RATES.—For the first time in many weeks the number of deaths from all causes in Boston was lower than for the corresponding week of a year ago. For the week ending February 8, there were 301 deaths, compared with 312 in 1918.

Diphtheria cases numbered 87 with seven deaths; scarlatina, 29 cases and two deaths; typhoid fever, one case; measles, five cases; tuberculosis, 44 cases and 19 deaths. Deaths from pneumonia numbered 32, heart disease 33,

and bronchitis four. There were 17 deaths from violent causes.

SPRINGFIELD ACADEMY OF MEDICINE.—The February meeting of the Springfield Academy of Medicine was held in Springfield on the evening of February 11. An address, "A Study of the Tonsil Operation," illustrated with lantern slides, was delivered by Dr. Clifford B. Walker, recently of the Peter Bent Brigham Hospital, Boston. Professor S. B. Betzler of Y.M.C.A. College delivered an address on "Gymnastic Re-education in Paralysis."

BOSTON CITY HOSPITAL UNIT.—The Boston City Hospital Unit, known officially as Red Cross Base Hospital No. 7, has received orders to return home, and is expected to arrive about March 1. It is believed that the unit is now at Brest, prepared to sail.

The first of the unit, consisting of doctors and some of the enlisted personnel, left Camp Devens in July; the last of the unit did not arrive on foreign soil until August 6. The unit was originally responsible for 1600 beds, at Tours; but later another building was constructed, giving it 1000 more patients to care for. Many letters commending the excellent work of the doctors and nurses have been received in this country.

The unit was commanded by Lieutenant-Colonel John J. Dowling. Lieutenant-Colonel Edward H. Nichols was chief of the surgical service, and Major John J. Thomas was chief of the medical department. There were originally fifty nurses, under the direction of Miss Emma M. Nichols, superintendent of nurses at the City Hospital; but this number was increased to one hundred, the additional nurses being selected from other hospitals. The unit was relieved by unit No. 120, which sailed from New York in November.

INFLUENZA IN BOSTON AND MASSACHUSETTS.—On February 4, 63 cases of influenza and 13 of lobar pneumonia were reported to the Boston Health Department. Since that time, the number of cases reported has been as follows:

February 5, 80 of influenza and 16 of pneumonia; February 6, 72 of influenza and 13 of pneumonia; February 7, 57 cases of influenza and 8 of pneumonia.

The following deaths have been recorded:

On February 4, 15 deaths from influenza and 1 from lobar pneumonia; February 5, 7 of influenza and 15 of pneumonia; February 6, 4 deaths from influenza and 3 from pneumonia; February 7, 7 of influenza and 3 of pneumonia.

On February 8, 59 new cases of influenza and 14 of lobar pneumonia, with 10 deaths from influenza and 5 from pneumonia, were reported to the Boston Health Department.

For the week ending February 8, the total number of cases reported in Boston was 411 cases of influenza and 57 deaths, compared with 501 cases and 73 deaths during the preceding week.

On February 9, 39 cases of influenza and 8 of pneumonia, and 11 deaths were reported to the Boston Health Department. On February 10, 33 new cases of influenza and 5 of pneumonia, with 5 deaths from influenza and three from pneumonia, were reported.

On February 11, 78 new cases of influenza and 14 of pneumonia, with 9 deaths from influenza and 3 from pneumonia, were reported to the Boston Health Department. This increase is attributed by Health Commissioner Woodward to delayed reporting on the two preceding days. 30 of the new cases were from Ward 5, a congested section.

The Massachusetts Medical Society.

The next annual meeting will be held in the Copley-Plaza Hotel, Boston, June 3 and 4, 1919.

OFFICERS OF THE MASSACHUSETTS MEDICAL SOCIETY.

Elected by the Council, June 18, 1918.

President, Samuel B. Woodward, 58 Pearl Street, Worcester.

Vice-President, George P. Twitchell, 17½ Federal Street, Greenfield.

Secretary, Walter L. Burrage, 42 Eliot Street, Jamaica Plain.

Treasurer, Arthur K. Stone, Auburn Street, Framingham Center.

Librarian, Edwin H. Brigham, 8 The Fenway, Boston.

STANDING COMMITTEES.

Appointed by the Council, June 18, 1918.

Of Arrangements.—J. L. Huntington, R. H. Miller, C. H. Lawrence, Jr., Donald Macomber, A. W. Reggio, J. B. Swift.

On Publications and Scientific Papers.—E. W. Taylor, R. B. Osgood, F. T. Lord, R. M. Green, A. C. Getchell.

On Membership and Finance.—C. M. Green, A. Coolidge, Jr., Samuel Crowell, Alfred Worcester.

On Ethics and Discipline.—J. A. Gage, J. W. Bartol, Henry Jackson, T. J. Robinson, David Cheever.

On Medical Education and Medical Diplomas.—H. C. Ernst, C. F. Painter, H. W. Newhall, J. F. Burnham, C. Frothingham, Jr.

On State and National Legislation.—S. B. Woodward, F. G. Wheatley, W. P. Bowers, E. H. Stevens, A. R. Crandell.

On Public Health.—E. H. Bigelow, W. I. Clark, Annie L. Hamilton, E. F. Cody, M. V. Safford.

OFFICERS OF THE DISTRICT MEDICAL SOCIETIES, 1918-1919.

Elected by the Societies.

BARNSTABLE.—E. S. Osborne, West Dennis, President; F. A. Binford, Hyannis, Vice-President; C. J. Bell, Wellfleet, Secretary; H. B. Hart, Yarmouthport, Treasurer; E. E. Hawes, Hyannis, Librarian.

BERKSHIRE.—Vanderpoel Adriance, Williamstown, President; E. H. Taylor, Pittsfield, Vice-President; O. L. Bartlett, Pittsfield, Secretary; J. D. Howe, Pittsfield, Treasurer.

BRISTOL NORTH.—W. H. Allen, Mansfield, President; H. G. Ripley, Taunton, Vice-President; A. R. Crandell, Taunton, Secretary; Ralph D. Dean, Taunton, Treasurer.

BRISTOL SOUTH.—J. A. Barré, Fall River, President; E. D. Gardner, New Bedford, Vice-President; A. J. Abbe, Fall River, Secretary and Treasurer.

ESSEX NORTH.—F. E. Sweetsir, Merrimac, President; J. J. O'Sullivan, Lawrence, Vice-President; J. Forrest Burnham, Lawrence, Secretary and Treasurer.

ESSEX SOUTH.—J. J. Egan, Gloucester, President; C. M. Cobb, Lynn, Vice-President; H. P. Bennett, Lynn, Secretary; G. Z. Goodell, Salem, Treasurer; C. M. Cobb, Lynn, Librarian.

FRANKLIN.—Charles Moline, Sunderland, President; J. A. Mather, Colrain, Vice-President; F. A. Millet, Greenfield, Secretary and Treasurer.

HAMPDEN.—A. L. Damon, Wilbraham, President; G. L. Gabler, Holyoke, Vice-President; H. L. Smith, Springfield, Secretary and Treasurer.

HAMPSHIRE.—W. H. Adams, Northampton, President; Sidney A. Clark, Northampton, Secretary; J. G. Hanson, Northampton, Treasurer; F. E. Dow, Northampton, Librarian.

MIDDLESEX EAST.—M. D. Sheehan, Stoneham, President; R. D. Perley, Melrose, Vice-President; Paul H. Provandie, Melrose Highlands, Secretary; Richard Dutton, Wakefield, Treasurer; G. W. Nickerson, Stoneham, Librarian.

MIDDLESEX NORTH.—G. H. A. Leahey, Lowell, President; J. H. Nichols, Tewksbury, Vice-President; J. A. Mehan, Lowell, Secretary; T. B. Smith, Lowell, Treasurer; P. J. Meehan, Lowell, Librarian.

MIDDLESEX SOUTH.—G. T. Tuttle, Waverley, President; H. T. Baldwin, Chestnut Hill, Vice-President; C. W. Adams, Cambridge, Secretary; E. A. Andrews, Newton Center, Treasurer.

NORFOLK.—E. N. Libby, Jamaica Plain, President; F. P. Denny, Brookline, Vice-President; Bradford Kent, Dorchester, Secretary; G. W. Kaan, Brookline, Treasurer.

NORFOLK SOUTH.—J. H. Ash, Quincy, President; E. H. Bushnell, Quincy, Vice-President; C. A. Sullivan, South Braintree, Secretary, Treasurer and Librarian.

PLYMOUTH.—Gilman Osgood, Rockland, President; Joseph Frame, Rockland, Vice-President; W. C. Keith, Brockton, Secretary, Treasurer and Librarian.

SUFFOLK.—J. B. Blake, Boston, President; G. G. Sears, Boston, Vice-President; George R. Minot, Boston, Secretary; J. L. Huntington, Boston, Treasurer; W. P. Coues, Boston, Librarian.

WORCESTER.—W. L. Johnson, Uxbridge, President; W. J. Delahanty, Worcester, Vice-President; G. A. Dix, Worcester, Secretary; G. O. Ward, Worcester, Treasurer; G. C. Lincoln, Worcester, Librarian.

WORCESTER NORTH.—A. P. Lowell, Fitchburg, President; C. E. Woods, Lunenburg, Vice-President; F. M. McMurray, Fitchburg, Secretary; F. H. Thompson, Jr., Fitchburg, Treasurer; A. P. Mason, Fitchburg, Librarian.

Obituaries.

WILLIAM HENRY BUFFUM, M.D.

DR. WILLIAM HENRY BUFFUM of Providence, who died Oct. 13, 1918, is the first member of the Providence Medical Association to make the supreme sacrifice in the line of duty in the world war. He was buried from Grace Church, with military honors, on Dec. 2, 1918.

His father, the late George A. Buffum, was from a family prominent on the Island of Rhode Island for several generations; his mother, Harriet Mitchel, is the daughter of the late John Alden Mitchel, and through her mother related to the Paine family.

Dr. Buffum, thus of substantial Rhode Island stock, was born in Providence, June 25, 1877; he prepared for college at the well-known Mowry and Goff School, took his A.B. degree at Brown University in 1898, and graduated in medicine, with honors, from Harvard University in 1902. In the Medical School he was a charter member of the Æsculapian Society.

After serving as medical interne in the Massachusetts General Hospital in 1902 and 1903, he entered upon the practice of medicine in his native city, serving as interne in the Providence Lying-in Hospital the first six months. At his death he was one of the visiting staff.

He was appointed medical interne to the Out-Patient Department of the Rhode Island Hospital in October, 1903; Visiting Physician to the Out-Patient Department for Children's Diseases in January, 1906; Physician to the House for the new Clinical Department for Infants Affected by Diseases of the Digestive Organs in July, 1912. This position he held at his death.

Coming to the Rhode Island Hospital after creditably completing his interneship in the near-by institution, under distinguished clinicians, bringing its traditions with him, he brought also his own enthusiasm, goodfellowship, and ability. Being especially interested in children's diseases, it was mainly through his energy that the Department of Children's Diseases at the Out-Patient Department was established, and he

was also, later, instrumental in establishing the new Clinical Department for Infants, of which he was made Visiting Physician. In his treatment of patients, whether rich or poor, he was wondrously kind and sympathetic, always ready with cheering words, and the tiniest patient never feared him. With his many good qualities, his loss to the hospital is deeply felt.

Among the first to enlist in the medical service of the world war, he joined the Rhode Island Naval Base Unit, ranking as lieutenant, senior grade, and went to the Naval Hospital at Newport, R. I., last May. Ordered abroad, he sailed from New York on the *Oxfordshire*, Sept. 25, 1918. After devoted work among the troops in the influenza epidemic that broke out on the crowded transport during a long, perilous, stormy passage, he landed in Liverpool on October 8, 1918, with the early signs of the disease developing in himself, and proceeded at once to a hotel there. Two days later he developed pneumonia and was sent to the Great Western Army and Navy Hospital, where he died after several hours of unconsciousness, on October 13.

He married, November 1, 1904, Edith Campbell, daughter of James M. Campbell of Providence. She, and one son, survive him, while another son, two years older, died four years ago. His mother and brother, G. Mitchel Buffum, live in California.

The sudden and lonely death of Dr. Buffum, in a foreign hospital, far from home and friends, has cast a gloom not only over his personal friends, but in many households in this vicinity. All those who knew him, both professionally and socially, have a strong feeling of personal loss. His winning manner, his sweet kindliness, his loving sympathy in time of trouble deeply endeared him to the families he was accustomed to attend.

At first a family practitioner, in the right sense, and, as such, a friend and adviser, of late years, he had devoted his abilities to the digestive troubles of infancy and childhood, and was widely and favorably known throughout this State for his success in that special branch of medicine. Many children and parents, far and wide, have for him a lasting feeling of friendship and gratitude and bear a debt they can never repay to one who has made their bodies strong and their lives worth living.

He was indeed the beloved physician, and our happiness has been greater and our faith in human nature stronger for having known him.

As a man, he was without fear and without reproach.

He as truly fell in the service of his country as if he had fallen gloriously on the field of battle. He fell between two posts of duty and none the less was the glory of his fall.

We ask to associate ourselves with his family in their proud sorrow, and we salute reverently the grief of his brave death.

FRANK L. DAY,
FRANK M. PETERS,
Committee,
Providence Medical Association.

THOMAS BUZZARD, M.D., F.R.C.P.

THOMAS BUZZARD, M.D., F.R.C.P., died in London on January 1, 1919, in his eighty-eighth year. He was born in London and received his early education at King's College School. At the age of fifteen he became apprenticed to a doctor and later studied at King's College Hospital. He received the degree of M.R.C.S. in 1854, and served in the cholera epidemic in Soho during that year. He took part in the Crimean War and assisted the establishment and conduct of a base hospital at Trebizond. For his excellent services he received the Crimean Medal, with the Clasp for Sebastopol, the Order of Medjidie, and the Turkish War Medal. Dr. Buzzard returned to England and graduated M.B. Lond. (1857). In partnership with Mr. J. G. French, F.R.C.S., he held the position of parish doctor to the St. Luke's district of St. James' Parish.

After six years, Dr. Buzzard retired from general practice. His journalistic work led him to the National Hospital for Paralyzed and Epileptic, where he eventually became physician. His connection with the hospital aroused his interest in neurology, and he gradually came to be one of the leading neurologists in London. Dr. Buzzard contributed several articles to Quain's *Dictionary of Medicine*, and an important paper on retro-ocular neuritis to the *Transactions* of the Ophthalmological Society, in 1897. Dr. Buzzard was one of the leaders of the etiological movement. He contributed an interesting paper on the influence of microörganisms and their toxins in the production of diseases of the nervous system to the Section of Neurology at the annual meeting of the British Medical Association, in Edinburgh, in 1898. Two

years later, at the annual meeting at Ipswich, he was president of the Section of Medicine, and took an effective part in the discussion on influenza as it affects the nervous system.

Dr. Buzzard married in 1869 and continued his practice for a number of years. He was president of the Clinical, Neurological, and Harveian Societies, vice-president of King's College Hospital, and a corresponding member of the Société de Neurologie, Paris.

An appreciation of his work and character by his colleague and friend, Sir David Ferrier, indicates the esteem in which Dr. Buzzard was held by the medical profession and by his friends:

"Dr. Buzzard was a happy combination of qualities of the head and heart which gained him a distinguished professional reputation and endeared him to a large circle of friends and acquaintances. We have travelled far in neuro-pathology since Buzzard was an active contributor to medical literature, but nothing has surpassed the accuracy of his observations and delineation of the symptoms of nervous disease. The 'sudden giving way of the legs' in locomotor ataxy ('Buzzard's symptom') is a classical example.

"Clinical work was Buzzard's forte, and nothing was more noteworthy than the laborious care with which he observed and recorded his patients' symptoms and the effects of treatment. He was a highly successful practical physician. Not only in professional matters, but in affairs in general, Buzzard was a man of great caution and sound judgment, and was regarded by his colleagues of the National Hospital as the 'Nestor' of the staff.

"Buzzard had a quiet, genial manner and catholic sympathies. He had many friends, not only in medical but in the most diverse circles, particularly artistic. He was himself an artist of considerable merit, and it was his chief pleasure during his holiday rambles in various parts of the world to make water-colour sketches of the places he visited. In later years he loved to show these to his friends, and recall the pleasant memories with which they were associated.

"Owing to the infirmities of age, Buzzard had, for several years past, ceased to concern himself with medical questions, but he kept up an active interest in the events of the day, and spent much of his time in the Arts Club or Athanaeum, where he read quietly or enjoyed pleasant intercourse with his many friends."

SIR CHARLES WYNDHAM, M. D.

IT is seldom that a physician attains distinction as an actor. Sir Charles Wyndham, who died on January 12th in his eighty-second year, is an example of a man who turned away from the medical profession and achieved success in another calling. In the comedy of society, he was one of the most accomplished of the British actors of his time, and his genius was a constant source of delight to his audiences. *The British Medical Journal* gives the following account of his life and achievement:

"He was born in Liverpool, the son of a medical practitioner named Culverwell, who during his son's boyhood practiced in London. Charles Culverwell was from the first enamoured of the stage, but the father's influence kept him to his medical studies at King's College sufficiently closely to ensure his passing the examination for the Membership of the Royal College of Surgeons of England in 1857. In 1858 he obtained the College Licence Midwifery. His intellectual capacity would have won him distinction in any profession. His versatility and knowledge of men and the world owed something to the circumstances of his education, in Scotland, in Germany, and in London. He appears to have attended the School of the Royal College of Surgeons in Ireland and the School of Anatomy in Dublin. In the *Medical Directory* for 1860 he appeared as M.R.C.S. 1857, L.M. and L.S.A. 1858, and M.D.Giessen (exam.) 1859. A motive that may have stimulated his keenness to obtain a medical diploma was an ardent desire to serve America in the civil war. He went to America, and after several disappointments was appointed surgeon in the Federal army. He was present at the battles of Chancellorsville, Fredericksburg, and Gettysburg, and served through the Red River campaign under General Banks. He had always had a strong inclination for the stage and found opportunities during the winters of the war to play in New York as "Charles Wyndham," under which name he was to become so widely known. He returned to England in 1865 and gradually won for himself a leading place on the comedy stage. He went to America in 1869 with a repertory including *The School for Scandal*, in which he gave an inimitable presentation of Charles Surface. He first established himself as an actor manager in London in 1875, and his shrewd judgment and accomplished business management made him one of the most successful managers of his day. He

gave up management in 1910, and gradually retired from the stage; during the last few years he had been in declining health. When in 1902 King Edward conferred upon him the honour of knighthood, it was felt to be a due recognition of a position attained by a combination of genius and hard work."

Miscellany.

SOCIAL INSURANCE IN GERMANY.

AN article on "Social Insurance in Germany," by Frederick L. Hoffman, has appeared in a recent issue of *The Spectator,* New York. It describes the physical deterioration of the working people in Germany and shows that the system of social insurance, as carried out in Germany, is a complete failure. The following extracts, based on information gathered from the Annual Reports of the Communal Sick Funds of several of the largest cities in Germany, have been taken from *The Spectator,* New York.

The reports at the outset draw "attention to the unfavorable hygienic results of the war, chiefly in consequence of the deficient nutrition of the population, resulting in a material increase in the frequency of diseases of the stomach and intestines and a reduction in the successful treatment of tuberculosis and related diseases, where the treatment primarily depends upon wholesome food in sufficient quantities. It is readily conceded, therefore, that there was an actual increase in the number of deaths in the experience of the Fund, from 1,782 in 1916 to 2,225 in 1917, primarily in consequence of the under-nutrition of the population ("Lunge oedema" is the term officially used in the report). The observation is made that the effect of physical deterioration had not become so apparent in 1916 in consequence of the conditions in 1915, as during 1917, largely because during the latter year and without reference to existing illness many of the members 'continued to work to the point of complete exhaustion.'

"Because of the larger amount of sickness and its prolonged duration there was an increase in expenditures for pecuniary support during sickness of 1,015,000 marks, aside from an increase in the expenditures for medical treatment of about 132,000 marks, for medicines, etc., of 110,000 marks, for hospital treatment of 132,000 marks, and for additional financial support of about 60,000 marks.

"A plan was therefore inaugurated by providing for those on the sick list at least one wholesome meal a day, but under very strict regulations, to preclude conflict with the elaborate food-rationing system for the population at large. This experiment, however, was limited to a maximum number of 750 persons of the Fund membership of 168,000. The experiment was not a success, for reasons not made clear in the report.

"The number of male members in the compulsory insurance section has been reduced by more than one-half, and whereas in this section in 1913 the proportion of women members was only 31.1 per cent., the proportion by March 15, 1918, had increased to 56.5 per cent. It may probably be safely assumed that the male membership consists almost exclusively of men entirely unfit for military duty and that the reduction in the male membership is far from having been made good by the admission of women workers whose age and marital condition, unfortunately, are not stated in the report.

"The administration of the Fund during the war has apparently been extremely lax and in disregard of elementary insurance considerations. As far as it is possible to judge, there has been entire freedom in matters of individual or family sick support, regardless of the practical cessation of contributions from the many members called out for military service. Much is therefore being done for the families of the injured and the killed, which, however laudable from a humanitarian point of view, cannot but imperil the future financial security of the institution. The sickness rate in the compulsory insurance branch of the Fund increased from 31 per cent. of the membership in 1915 to 37 per cent. in 1916 and 46 per cent. in 1917. The death rate of the entire male membership of the Fund increased from 9.0 per 1,000 in 1914 to 20.2 (including, however, members in military service) during 1915. The rate diminished to 16.6 during 1916, but increased to 22.8 during 1917. There was also an increase in the mortality of the female membership from 6 per 1,000 during 1914 and 1915, and only 5.4 per 1,000 during 1916 to 7.3 per 1,000 during 1917. This increase in the death rate during the last year under observation has, unquestionably, a direct bearing upon the lamentable food situation, or, in other words,

is directly attributable to starvation, or semi-starvation, as the case may be.

"It is, however, apparently quite clear that the financial condition of the Fund cannot be otherwise than precarious. The reserve was reduced to the amount of 649,000 marks, in consequence of the large expenditures for sick support, etc. The per capita management expenditures were also higher than during any previous year in the experience of the Fund, or, respectively, 3.83 marks per member in 1913, against 5.57 marks in 1917. The evidence of an excessive amount of malingering is overwhelming. Out of 5,881 cases of sickness especially investigated, 48 per cent. were found to be persons fully capable of self-support, and 11 per cent. in addition were warned and made to return to work at the end of the current week for which compensation was paid. Only 29.6 per cent. were found to be really deserving of sick support or unable to work. These figures vary more or less from year to year, but at no time in the past has the proportion of cases properly entitled to sick support of those actually receiving sick benefits been as low as during 1917. In other words, there can be no question of serious doubt that the resources of the sick fund are being used in an improper manner, to amplify an otherwise deficient family income and that the entire experience of the Fund clearly reflects the deplorable physical deterioration of one of the most representative cities of the German Empire, in consequence of the war.

"An increase in the contributions has naturally been strongly resisted by the membership. At an extraordinary meeting held in Munich on April 13, 1917, the demand was made that in consequence of 'the enormous increase in prices of all the necessaries of life,' the sick pay should be increased from 50 to 75 per cent. of the normal earnings and that such pay should commence from the first instead of the fourth day of sickness, when of longer than one week's duration, or followed by death or by an industrial accident. It was pointed out that on account of the diminishing purchasing value of German money, the amounts actually paid were entirely insufficient for the legitimate needs of the sick. It was therefore suggested that the required amounts should be raised, not by an increase in contributions, but 'by the use of the reserve fund.' This request on the part of the employees, or the insured, was strongly opposed by the employers, but apparently the former, being in the majority, carried their point and secured the adoption of a measure which, if persistently followed, must of course lead inevitably to actuarial insolvency of the funds, if, in fact, such insolvency is not already a common feature to all the funds at the present time.

"The tendency in the administration of German Communal Sick Funds is obviously in the direction of the gradual conversion of such funds into public institutions for the administration of public charity and relief. The explanatory text of the annual reports emphasizes more and more the demands made upon the funds, other than such as would legitimately arise out of the contractual relationship of the parties concerned. After stating, for illustration, that the number of patients unable to work in the experience of the Munich Communal Sick Fund increased from 66,614 in 1916 to 72,765 in 1917, and that this increase was on account of 'the very heavy deprivations and increased physical demands in consequence of the war,' it is said further that 'the results have naturally been felt by the Sick Funds and that bodily weakness and under-nourishment frequently constitute the principal cause of incapacity for work on the part of the members of the fund.' Such conditions, it is further pointed out, are responsible also for an increase in the frequency of tuberculosis, the control of which, with an increase in the cost of living, as shown by the actual increase in the number of deaths, has become more and more difficult. Since 1913, it is stated in the report, the number of deaths from tuberculosis (probably in the city of Munich) had increased by more than 50 per cent.

"The experience of the German Communal Sick Funds during the war is necessarily inconclusive on many of the broader aspects of Germany's physical deterioration during the last four years. The reports, nevertheless, reflect a truly lamentable condition, which, in time, must react disastrously upon the finances and the actuarial solvency of the funds, which, on the undemocratic principle of compulsory thrift, have virtually been made the chief depositories of the savings of the German working people. Though ostensibly managed by the insured, they have practically become state in-

stitutions, to be managed by the authorities for whatever governmental purposes may require. Their reserves, probably never sufficient for the ultimate needs of the future, are being heavily drawn upon for war purposes. The invested funds are largely being converted into war loans, so that with the inevitable results of a depreciation in the value of all German securities the outlook for the future on the part of these institutions is decidedly discouraging. The most serious aspect of the experience during the last two years is, however, the increased physical deterioration of the German working people, both men and women, best emphasized in the following extract from the medical report of one of the sanatoria under the control of the Munich Communal Sick Fund, to the effect that, 'Nearly all the patients arrive at the institution in a more or less alarming condition of under-nourishment. Many of them, also, exhibit unmistakable signs of war consequences in the larger degree of frequency occurrence of nervous diseases.' ''

BRITISH APPRECIATION OF HARVARD UNIT.

THE Harvard Surgical Unit, whose active work in France has just been brought to a close, was organized in the Harvard Medical School under the leadership of Dr. Edward H. Nichols, and arrived in France early in July, 1915. Soon afterwards, by arrangement with the British Army medical authorities, it took over No. 22 General Hospital at Camiers, one of the large base hospitals which had been erected in the Etaples area. The following account of the activities and excellent service rendered by this unit appears in a recent issue of *The British Medical Journal:*

''It was originally intended that the work should be carried on after the first three months by relays of surgeons from one or two other American universities; but owing to unforeseen circumstances this idea was given up, and Harvard alone continued to be responsible. The unit was organized on the pattern of a base hospital in the British regular service. The officers did not receive commissions, but relative rank was given according to the duties they were to perform.

''In November, 1915, on the arrival of the second party of surgeons from Harvard, the hospital moved into winter quarters at Wimereux, but early next year it was back again at Camiers, near its former site, between the railway and the foot-hills, where it remained until the end.

''During the battle of the Somme in 1916 the unit for the first time got really busy. Up to the end of that year its position was that of a neutral medical unit under the terms of the Geneva Convention, the administrative officers and the 'other ranks' alone being drawn from the R.A.M.C. In December considerable changes were made. The President and Corporation of Harvard University resolved to continue the unit for the period of the war, and requested the British military authorities to notify it as a belligerent medical unit. Temporary honorary commissions in the R.A.M.C. were given to officers enlisting for the duration of the emergency. In this way the unit was put on a more stable basis and its position was regularized. The entry of the United States into the war in April, 1917, had a somewhat unsettling effect on the status and personnel of the hospital, but within a few months the staff had settled down again as a harmonious party of Americans, Canadians, and British, with Lieut.-Colonel Cabot as Commanding Officer. During that year the hospital got through a tremendous amount of hard work. Its full nominal capacity was 2,370 beds, but the patients at one time numbered as many as 4,000. Besides their work at the base the members of the medical staff were given many opportunities for gaining experience and lending valuable aid in other parts of the war area. Almost every officer went up the line—some went in surgical teams, others in medical 'chest' teams, and there was scarcely ever a time when members of the staff were not scattered over France serving temporarily in one or other kind of medical unit of the British army.

''In the winter of 1917-18 a great many hernia operations were done, under local anaesthesia, in order to render soldiers fit for general service. From August, 1918, onwards a large amount of experience was gained in the practice of delayed primary suture of wounds at the base, more especially in cases of compound fractures of the arm and hand. Notes were kept of the first thousand patients thus treated by primary suture more than forty-eight hours after being wounded, and material was obtained for comparative analysis of the results. More than 85 per cent. of the cases healed by first intention. Colonel Cabot and his staff were among the first to obtain sanction for the routine employment of women anaesthetists. Nursing sisters were selected for courses of instruction in anaesthesia, and for the last two years all the anaesthetics of the hospital were administered by women. Members of the staff had a considerable share also in effecting the introduction of blood transfusion as a working method of resuscitation.

''When the end of hostilities came into sight steps were taken to disband the Harvard Unit early. On January 8th the entire medical and nursing staff left Camiers, and crossed to England on their way home to America. Beyond the practical aid given to some 175,000 British sick and wounded, the Harvard Surgical Unit has contributed in no small measure towards that

Anglo-American unity upon which we believe the happiness of the world will in large measure depend. We therefore share the hope expressed by Colonel Cabot that the Harvard unit will not disappear now that its working days are over, but that it will survive in some permanent form as a landmark in the progress of the English-speaking fellowship of medicine."

In behalf of his government, the Right Honorable Arthur H. Balfour, Minister of Foreign Affairs for Great Britain, has expressed appreciation of the services of the Harvard Surgical Unit in a letter to President Lowell of Harvard University.

"My Dear Mr. President:

"Now that the Harvard Medical Unit has fulfilled its noble mission to the British troops in France, and has earned the tribute of their undying gratitude, I desire to offer to that splendid organization some expression, however inadequate, of my deep appreciation of the great work that it has performed.

"It would have given me the utmost pleasure to have conveyed this message in person when the unit passes through London on its way home to the United States. But this, unfortunately, is denied me, since in mid-January I myself shall be engaged at the peace conference in Paris.

"May I, therefore, count on your good offices to let every member of the unit know how grateful his majesty's government feels for the generous offer made and carried out in December, 1916? Through two strenuous and memorable years the work of General Hospital 22, the largest hospital unit serving with the British army, has held a record for skilful and untiring treatment of our wounded.

"The memory of so much service and self-sacrifice can never pass from us; it will be cherished in perpetuity by the relatives and friends of those whom the Harvard unit has tended with such admirable devotion.

"Let me wish to one and all of our fellow-workers in the war a safe return from the scenes of their labors. They have added lustre even to the fame of Harvard, and have forged a new and enduring link in the bonds of loyal regard by which we should ever be united. Believe me, my dear Mr. President.

"Arthur James Balfour."

It is with a feeling of pride in the spirit and achievement of the profession that we accept these worthy tributes to the members of the Harvard Unit.

PHLEBOTOMUS FEVER.

The *Lancet* has recently published the following account of phlebotomus fever,—a tropical disease produced by the *Phlebotomus pappatasii*, a semi-transparent, yellowish fly found chiefly on the shore of the Mediterranean:

"The flies specially dislike wind, so they are not found on the hills, even as low as 600 feet. They dislike bright light and complete darkness, yet they hide themselves in holes. In houses they may cover the walls 'as if sown.' The female bites especially in the gloaming and at dawn. It makes many punctures, and after several suctions becomes sluggish, so is easily caught in the morning or destroyed. The flies bite through linen. Thick socks or gloves probably protect, and so does fine gauze. Ventilation is necessary as well, for in an ill-ventilated room they can creep through a gauze-mesh, but they cannot pass if there is a draught. The floor of a hut should be concreted, as they come out of holes in the ground. They dislike cigarette smoke and alcohol fumes, so it is not surprising that the Turks smoke numerous cigarettes. Dr. Brack, who served with a German detachment in Turkey in 1916, noted that:

'In May there were none of these flies, but four cases of three-day fever occurred. The flies and the cases became very numerous in June, July, and August, but ceased by mid-September, when the flies disappeared. These cases seriously diminished the battle-worthiness of the troops. The flies were very troublesome. The individual sting is painful, but, in fact, the stings were so numerous as quite to prevent sleep, and men's faces swelled up out of knowledge. Sometimes a vesicle would form, sometimes even a blister. In one case the numerous blisters were filled, not with serum, but with blood. All Dr. Brack's men got the fever; incubation, four to ten days; rapid pyrexial onset; fall by lysis usually in two or three days. The highest pyrexia occurred among men working in the sun. The fever was disabling, and was followed by great desire for sleep, weakness, headache, and loss of appetite, constipation usually, sometimes diarrhea, which might even be bloody. No exanthem, but a conjunctivitis very frequent, rarely purulent. Patient usually laid aside for ten days and relapses occur. Generally the fever is lower the second time. As to *treatment*, and first as to prophylaxis: A skilful medical officer should advise in the choosing of a camp, on a site lying high, exposed to the prevailing winds, and, if possible, on the reverse slope of a hill, so as to be protected from the enemy. The horse-lines should be far from the men's tents. The best treatment is to leave the patients at rest, little disturbed by questions, only a few words of encouragement given them. Keep their surroundings quiet and free from flies. Encourage sweating, by fomentations to the chest, hot tea, and 30 gr. aspirin. Calomel, 4 to 6 gr., is useful, and opium if diarrhea is severe and with blood.

Zinc does no good to the conjunctivitis, hot sandbags are useful for the muscular pains, and invaliding home is required if debility is severe. The disease may become chronic unless the medical officer treats it energetically. Immunity is not acquired. As to *differential diagnosis:* Malaria never came in question here, though many blood smears and deep drops were examined; anopheles were never found in the camp. Dengue was considered, but there was no eruption on the third day, nor were there joint pains, nor bronchitis, and dengue began later in the year usually. Dysentery never occurred in the camp, so what diarrhea occurred was due to the phlebotomus fever. Each case required complete examination. The epidemic commenced among men on stable guard, and there was a short illness epidemic among the horses at that time; two days of fever, with marked subsequent debility, no diarrhea; but though these flies were prevalent, they were never noticed to settle on the hairless regions of the animals.'

Dr. Brack hopes to be able to protect his men from the flies on these lines in another year."

A TRIBUTE TO THE LATE DR. PUTNAM.

The following tribute to the life and character of the late Dr. James Jackson Putnam, by H. Addington Bruce, has appeared recently in the Associated Newspapers under the title of "Lives that Illumine." It deserves republication, as a worthy estimate of a distinguished member of the Boston profession.

"There are some men whom to know is more than a delight. It is an inspiration, an illumination. Such a man recently passed away in Boston when James J. Putnam died.

"Craving ever to be of service rather than to win renown, Dr. Putnam, years before his death, was internationally known for his work in medicine and psychology. He was one of the first among American physicians to appreciate the kinship between the two sciences, and the progress of medical psychology in the United States owes much to his courageous efforts.

"Courageous, because the establishing of medical psychology as a recognized aid in healing required first of all the overcoming of many prejudices. Open hostility, criticism, even ridicule and contempt had to be faced by any physician rash enough to advocate the claims of mental medicine.

"Dr. Putnam faced all this unhesitatingly. Conscious of insight into truths which should be universally accepted, he persistently urged these truths upon his colleagues. And in the urging, to the great gain both of civilization and of suffering humanity, he had the advantage of his rare personality.

"Of uncommon intellectual vigor, one of his outstanding traits was the noble simplicity that characterized his friend, the great philosopher, Josiah Royce. The tolerance of their mutual friend, William James, did not excel the tolerance of James Jackson Putnam. He could sympathize with an opponent even in the heat of combat.

"Such a man is always hard to overcome. As the champion of a good cause there is no overcoming him. And, in fighting for scientific recognition of the strange powers of the mind in both causing and curing disease, Dr. Putnam was fighting for one of the best of causes.

"It was my good fortune to have occasional opportunity to discuss with him problems he had much at heart. Some of these, at my urgent request, he ultimately dealt with in his remarkable book "Human Motives," a book that will repay attentive reading. It gives men clearer knowledge of the nature of their being, and it is a stimulus to higher, finer thinking.

"And James J. Putnam himself was a stimulus to that. Always I came away from our talks mentally re-invigorated. Nor could it be otherwise, so radiant was he with the strength of sincerity.

"This, indeed, is the cardinal fact in all lives that illumine. They are, above everything else, sincere. Given intellectual force, sweep of imagination, keenness of vision, yet illumination for others will not follow unless sincerity be there.

"Which is a truth it would be well for every one of us to keep in mind."

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Correspondence.

THE APPLICATION OF ETHICAL ECONOMICS TO MEDICAL PRACTICE.

Seattle, Washington, Jan. 9, 1919.

Mr. Editor:

Prior to this war various evolutionary forces, without intelligent aid or organized assistance on the part of the medical profession, gradually compelled and still are compelling the followers of medicine into:

1. Accepting the specialist,
2. Demanding hospital facilities,
3. Associating and segregating into more or less organized groups,
4. Establishing private clinics, as The Mayo Clinic and similar institutions,
5. Establishing, as just instituted by Columbia University of New York, a still more advanced form of scientific medical organization, a clinical laboratory.

The same evolutionary forces have caused the laity:

1. To form mutual benefit organizations for the sick,
2. To demand contract practice,
3. To form hospital associations,
4. To demand state aid,
5. To demand free clinics.

In every one of these vitally important politico-economic movements, and in view of the fact that

millions of men will return after the war and demand for themselves and for their families the same scientific treatment they have experienced under military organization, medicine as a profession has failed to recognize the same exciting cause in each instance—an economic demand that the theoretical standard of efficiency, "Medical Ethics," must be replaced by a more practical standard, "Ethical Economics." This standard demands the application of scientific methods, through economic organization, to every-day life, so that efficient medical and surgical treatment will come within the reach, not of the few who can receive hospital treatment in standard institutions, but of every human being.

Confronted by the above politico-economic facts, a very pertinent question presents itself to the medical profession at large: What is medical organization—medical education—doing to solve these problems, at a time when an imminent reconstruction period confronts every form of organized society, including the profession of medicine?

Based on observation and experience of 20 years, the writer claims that virtually nothing practical has been systematically undertaken.

Nowhere is there evidence that medical organization—medical education—has ever recognized three basic psychologic factors that govern all intelligent human acts:

1. One hundred per cent. of the representatives of medicine, physicians, are human beings, and the minds of the highest and lowest are compounded of the same elements, held subject to the same laws of action; and the knowledge that any one of them possesses comes—as it does to every other human being—through the ordinary channels of the senses.

2. In the search for knowledge in every branch of human society, including medicine, science has produced innumerable mechanical aids to increase the efficiency of the senses of man. Therefore, logically, all things being equal, the mind of man gathers knowledge in proportion (*a*) to the number of mechanical aids employed to increase the efficiency of the senses; (*b*) the accuracy with which these aids are employed.

3. As a rule, normal human emotions govern every human being, including the physician. Therefore, if the recompense for labor does not enable the physician to carry overhead expenses; does not give him time and funds for improvement, study, travel and necessary recreation; does not produce profit that is protection for his family and for himself in sickness and old age; he can neither give efficient scientific service nor continue to progress. If adequately recompensed, he can give scientific service far more readily and is more likely to progress.

Yet in the face of these obvious evolutionary politico-economic movements and the basic psychological facts that govern intelligent human action, medical education is still demanding for every individual admitted to the study of any branch of the science and art of medicine a high standard of preparatory education, in substance, a B.A. degree from a recognized educational institution.

This standard, combined with the principles of education that are employed in every medical college after admission to study, is such that it can be justly claimed that the educational methods pursued tend to make the graduate physician in this work-a-day world pursue the practice of medicine as a pure science, that can isolate itself, that needs no association with the applied sciences, especially economics. For instance, medical education during all these years has apparently never conceived of the practical necessity of recognizing the psychological fact No. 1 as a pre-educational factor of utmost importance.

The United States Government, on the other hand, by the present war has been unceremoniously forced into recognizing its educational value—as evidenced by the first standard of admission to the aviation service, where the highest possible human skill is required in order successfully to destroy life. In this initial examination the most accurate possible physical and mental tests are employed in order to ascertain not only the inherent character and personality of the candidate, but more especially the acuteness, stability, and durability of *every one* of his senses.

In the profession of medicine, however, where there is a demand, if it were possible, for even greater character and personality, acuteness, stability, and durability of the senses—the object of the physician being to preserve life—no recognition is given to the fact that efficiency in applying abstract knowledge depends upon the efficiency, not of one, but all of the special senses.

The student of medicine may be deficient in one or more of his special senses, have little tactile sensibility, a poor sense of smell or hearing, defective eyesight, little character and no personality adaptable to a physician. Yet no tests are made to ascertain or correct these defects, and the student is graduated and permitted without any organized supervision to try to preserve—where he would not on the same grounds be permitted to destroy—life.

As to the educational value of the psychological fact No. 2, there can be no question that the mechanical aids to scientific medicine (which include all laboratory methods, even history filing and compilation may be added) have become so numerous, have so developed in detail, that to attain efficiency requires not general but definite technical knowledge.

There can be no question that medicine will become organized in the future, and when so organized it can be no exception to the general rule and must attain efficiency by having subdivision of labor—therefore, organization of labor and equipment.

Medical education, as conducted today, may be ethical, but it is still decidedly theoretical. Medical schools virtually only graduate officers, and then only colonels. No provision is made for officers of lesser rank, for the privates in the form of technicians. For privates we, as a profession, must take the unsuccessful physician, volunteer nurse, half-trained office girls, or any kind of unskilled help available, whom each physician must train for himself after his own sweet will in order to fill the ranks of scientific medicine with privates. Yet economic organization is staring the profession in the face. With this army thus organized we guarantee to defend the public from disease—then wonder why our efforts as a profession are not appreciated!

Even the colonel, who may later wish and be willing to work for a higher rank—for instance, to become a specialist—there is no institution provided where, through concentration of skilled leaders, equipment, technical assistance, and economic organization, he can learn his specialty from A to Z, and be instructed and equipped with a modified plan of economic organization, whereby he can do justice to the public and his profession by maintaining and delivering the high standard of goods which he advertises to sell in competition with the inferior grades of the cults by attaching to his name an "M.D."

As a profession, in most of our medical colleges, we unquestionably try to manufacture a high standard of goods, which goods must be sold in the open market to the public. We advertise to the public that the sign "M.D." signifies the highest standard. Yet as a profession have we adopted any means whereby we can demonstrate to the buyers, the laity, the value of standard "A" as compared with the imitation "B." and in so doing increase the demand for standard "A" goods, to the benefit of both producer and consumer? I think not.

The public through universal education, is being taught to think, to reason, yet the medical profession today, like the cults, is asking the public to accept goods on faith without investigation; and we claim as a standard science based on reason, not wholly on faith.

If the profession of medicine will not undertake

to solve these politico-economic problems for itself, it is true that evolutionary forces will solve them for us, but with brute force and a corresponding indiscriminate destruction—unless man employs the intelligence that nature has given him to anticipate evolutionary movements, through the use of intelligence scientifically applied but governed by the higher human emotions.

It is not within the limits of this letter even to outline the means to the end that experience suggests. But the old adage always proves true that where there's a will there's a way.

The object of this letter is to arouse, with your assistance, sufficient sentiment to instigate a systematic, organized movement to attain the end sought—the practical application of ethical economics; so that humanity may be efficiently served by the profession of medicine, and the profession win universal respect and attain efficiency through following out not only ethically but economically, the dictates of the noblest of all the sciences. It is intended to prove that such a movement is feasible, for if an imperfect, experimental organization, based on a belief in principles, carried on by an individual, can apply these principles of ethical economics successfully, certainly, with the intelligence of the profession concentrated towards that end, there can be no question of the outcome of the many economic problems confronting the science of medicine.

Criticism is invited, and the writer would appreciate notice or information of any criticism or suggestion, direct or indirect, that may be offered.

Respectfully submitted,

G. S. PETERKIN, M.D.

RECENT DEATHS.

DR. MYRON LEVI CHAMBERLAIN died at his home in Boston, Feb. 13, 1919, aged 74. He was a graduate of the Bellevue Hospital Medical College in 1867, practised in Southbridge until 1874, and in Boston after that. He was a member of the Massachusetts Medical Society and of the American Medical Association. He is survived by his widow, who was Miss Cynthia P. Wales.

DR. CARLOS BARAJAS, a prominent physician in Mexico City, and professor of anatomy in the University, died recently.

DR. R. S. GOMEZ died a short time ago. He was professor of internal pathology and descriptive anatomy at the University of Buenos Aires.

DR. JOHN ALLAN MACCORMICK died recently at the St. Elizabeth Hospital, in Brighton, Mass., at the age of 45 years. He was a graduate of the Harvard Medical School, St. Francis Xavier College, Nova Scotia; Sloane Hospital, New York, and Carney Hospital, South Boston, and was visiting physician for the St. Elizabeth Hospital. He was a member of the Massachusettts Medical Society and the Intercolonial Club, and was physician for Clan Ramsey, Order of Scottish Clans.

DR. AARON S. OBERLY died recently at his home in Avon, Conn., at the age of 81 years. Dr. Oberly served as a Naval surgeon in the Civil War, and was chief surgeon with the Adriatic squadron of the United States Navy in 1886.

CAPTAIN HOWARD E. AMES, medical director, U.S.N, died on December 27, 1918. Dr. Ames had been an officer in the Navy since 1875, and had been on the retired list since 1912. He served as medical officer on board the *Bear*, which rescued General Greely and his party in the Arctic regions. He was a member of the Biological Society.

DR. T. BAYMA died of influenza in Brazil recently. He was a distinguished physician and bacteriologist of S. Paulo, and director of the bacteriologic and the vaccine institutes in that city. Dr. Bayma was 55 years of age.

NOTICE.

INCOME TAX DUE. RETURNS MUST BE FILED ON OR BEFORE MARCH 15. BILL PROVIDES HEAVY PENALTIES.

Work on the collection of $6,000,000 has been begun by the Bureau of Internal Revenue. This is the estimated yield of the new revenue bill. The income tax provisions of the act reach the pocket-book of every single person in the United States whose net income for 1918 was $1,000, or more, and of every married person whose net income was $2,000 or more. Persons whose net income equalled or exceeded these amounts, according to their marital status, must file a return of income with the collector of internal revenue for the district in which they live on or before March 15.

For failure to file a return on time, a fine of not more than $1,000, and an additional assessment of 25% of the amount of tax due. For "wilfully refusing" to make a return on time, a fine not exceeding $10,000, or not exceeding one year's imprisonment, or both. For making a false or fraudulent return, a fine of not more than $10,000, or imprisonment for not more than one year, or both, together with an additional assessment of 50% of the amount of tax evaded. For failure to pay the tax on time, a fine of not more than $1,000 and an additional assessment of 5% of the amount of tax unpaid, plus 1% interest for each full month during which it remains unpaid.

In addition to the $1000 and $2,000 personal exemptions, taxpayers are allowed an exemption of $200 for each person dependent upon them for chief support if such person is under eighteen years of age and incapable of self-support. Under the 1917, act, this exemption was allowed only for each dependent "child." The head of a family—one who supports one or more persons closely connected with him by blood relationship, relationship by marriage, or by adoption—is entitled to all exemptions allowed a married person.

The normal rate of tax under the new act is 6% of the first $4,000 of net income above the exemptions, and 12 per cent of the net income in excess of $4,000. Incomes in excess of $5,000 are subject also to a surtax ranging from 1% of the amount of the net income between $5,000 and $6,000 to 65% of the net income above $1,000,000.

Payment of the tax may be made in full at the time of filing return or in four installments, on or before March 15, on or before June 15, on or before September 15, and on or before December 15.

Revenue officers will visit every county in the United States to aid taxpayers in making out their returns. The date of their arrival and the location of their offices may be ascertained by inquiring at offices of collectors of internal revenue, postoffices and banks. Failure to see these officers, however, does not relieve the taxpayer of his obligation to file his return and pay his tax within the time specified by law. In this case taxpayers must seek the Government, not the Government the taxpayer.

SOCIETY NOTICE.

NORFOLK SOUTH DISTRICT MEDICAL SOCIETY.—Meeting for Medical Improvement, United States Hotel, Boston, Thursday, March 6, 1919, at 11.30 A.M.

Reader, Halsey B. Loder, M.D.

Subject, "Fine Points in Surgical Diagnosis," for Dr. J. C. Fraser, Weymouth.

C. A. SULLIVAN, M.D., *Secretary.*